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# REPORT ON THE EXCAVATIONS ON THE SITE OF THE ROMAN CAMP, AT THE DEANERY FIELD, CHESTER

BY ROBERT NEWSTEAD

WITH PLATES I-IX

With a Preface by MRS. PAGET

## PREFACE

THREE things contributed to the excavations in the Deanery Field. First and foremost, the fact that the ground had never been scientifically explored, and curiosity was natural as to what lay under the grass.

Secondly, the Dean, with his invariable generosity, was ready to grant permission to dig; while W. Ferguson Irvine, Esq., W. Haswell, Esq., Peter Jones, Esq., and the Misses E. and M. Paige Cox supported the enterprise. To all of whom our thanks are due.

But lastly and above all there was the enthusiasm, skill, and knowledge of Professor Newstead without which nothing could have been accomplished. For our Professor was ready to dig from 10 A.M. to 5 P.M. almost without intermission, a task that required immense endurance and dexterity as each level had to be kept as far as possible separate, and the earth had to be moved without injury to any Roman fragments it might contain. To this skilled manual work was added unerring knowledge and admirable draughtsmanship and photography. Further, the Professor's love and understanding of natural history has made him quick to identify the tiny bird bones of Roman days or the noctuid caterpillar of to-day hibernating at the depth of between from three to five feet. All this has helped to make the excavation of real educational value to those taking part, indeed we owe Professor Newstead a debt not easily repaid.



I would also like to thank Mr. Ned Dickenson for his stalwart assistance and keen interest.

It is hardly necessary to add that the natural and rightful destination of anything of archaeological interest found in Chester is the city itself, so that nothing will pass into private collections.

ELMA K. PAGET.

BISHOP'S HOUSE, CHESTER,  
May 1924.

## REPORT

The Deanery Field, Chester (Pl. I), covers an area of nearly three acres of pasture land. It lies at the north-east angle of the older portion of the city, being bounded on the north and east, respectively, by the existing city walls, and is, practically, the only piece of open ground, within the lines of the Roman fortress, which is left available for exploration.

We were under the impression, when first we began our task, that this field had never been explored by the hand of the archaeologist. We have since discovered, however, that the late Wm. Thompson Watkin<sup>1</sup> did some deliberate digging there in the year 1883. Unfortunately he has given a very meagre account of what he found, and has left us in doubt as to the date of the buildings of which he found extensive remains. As to the latter it may be of interest to quote the text of his remarks: 'At 21 feet from the inner side of the city wall, the NW. angle of an ancient building was come upon. Its walls were subsequently traced and partially laid bare, and it was found to be a parallelogram, 70 feet in length E. and W. by 24 feet in width N. and S. It lay parallel to the north wall of the city. It was formed of blocks of red sandstone, axe dressed, about a foot square, and in 6-inch courses. The NW. angle (the portion first discovered) was found to be the highest portion of the building remaining. It was 8 feet high, and its summit was only 2 feet beneath the surface. It is quite uncertain to what period this building belonged. The mortar was poor—formed of river sand, lime, small pebbles, and fragments of sandstone. . . . Large masses of Roman

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1. *Trans. Historic. Soc. Lancashire and Cheshire*, vol. XXXVI, 1887, pp. 10-11.



concrete and roofing tiles, pottery, etc. were lying above them. . . .’ He also adds : ‘ Singularly enough no Roman coins were found, and only a portion of an inscribed tile, which, when entire, had borne the stamp of the Twentieth Legion.’ It is tempting to identify the remains to which he refers as belonging to the period of the Roman occupation of Chester. His descriptions of the composition of the walls, brief though they may be, agree in every detail with those which we have explored on the opposite side of the field. One may also add that so far we have found no trace of buildings belonging to post-Roman times, the presence of which might possibly lead to confusion.

Our excavations were restricted to a small plot <sup>1</sup> (Pls. I and II) which had been brought under cultivation during the war. This plot represents about one fifteenth part of the whole field ; but even this small area was not completely excavated, owing, in part, to the presence of small patches of vegetables. We began our task on the 18th November 1922, and closed down in August the following year, but the time actually devoted to digging represented a period of seven weeks only.

The depth of made earth or disturbed soil varied between 6 feet 3 inches and 5 feet 3 inches, at which depths the natural rock (Bunter sandstone) was reached. The Roman stratum began at a level varying between 2 feet 6 inches and 3 feet 6 inches below the existing surface. Little or no trace of virgin soil was found ; but here and there the rock appeared to have been weathered down to a fine sandy layer such as may have supported a zerophytic flora. There were, however, marked traces on the northern side of the plot that the natural surface had been artificially levelled as the hollows had evidently been filled in with rough angular bits of rock.

The chief problems which awaited the excavators were the nature of the buildings which were erected on this part of the Roman fortress of Deva, and the period or periods of their occupation. The general results derivable from the excavations are, I feel, best left over for another season. But one may briefly add here that there was evidence that the earliest occupation (pottery from site VI) dates back to the beginning of the Flavian period (A.D. 69), and that there appears to have been a

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1. Another small plot (No. 2) has been fenced in and is now being excavated. It lies parallel to the long wall (see Pl. I), immediately west of the plot already explored, and extends as far as the Abbey Green. May 1924.



continuous occupation of the site to the close of the fourth century (coin of Gratian, A.D. 367-383).

### ARCHITECTURAL, ETC.

*Buildings.* A reference to the plan (Pl. II) will give the relative position of the traces of the Roman buildings which were found on this small site. It indicates very clearly that there must have been extensive structural alterations from time to time, as the footings differ materially in important details and also in orientation.

The early 'rubble foundations' were composed of small angular bits of sandstone set in a liberal admixture of mortar. The evidence for fixing the period of these footings admits of fairly close dating, for in them on site VII there were found, embedded in the mortar, potsherds belonging to two early vessels, viz.:—two rim fragments of the *terra nigra* bowl (Pl. VIII, Nos. 11, 11A) and one piece of the Samian bowl (Pl. VIII, No. 10), both of Dragendorff, form 29. These vessels may be dated as not later than the close of the Flavian period. No such direct evidence was forthcoming to fix the period of the presumably later structures, though the fragments of pottery taken from the face of the wall on site IV belonged chiefly to the later period of the occupation; there was, moreover, a complete absence of mortar in the construction both of the footings and the ashlar work of the structure.

*Floors.* Sand floors occurred in many places on the western half of the plot (see Pl. II). They gave an average depth of 12 inches, and in all cases were resting either upon the solid rock or a stratum of broken rock and sand. In these floors were found several small pockets of refuse consisting of meat bones (mostly of the ox and pig) and fragments of pottery. The floor and the rubble footings of the wall on site VII can be synchronised by the discovery in both of portions of the same first-century vessels (Pl. VIII, Nos. 10, 11, 11A). The floor on site VI must also belong to an early date, as in it was found the *terra rubra* cup (Pl. VIII, No. 7) with the *planta pedis* stamp, a type of vessel and stamp which seem to have died out, at the latest, in the early Vespasian period. On the other hand the sand floor on site VB belongs apparently to a much later period, as it yielded a coin of Constantine I



(A.D. 306-337). Part of the floor on site VIA was covered with a layer of soot and charcoal with a free admixture of finely comminuted iron slag, and resting at a slightly higher level was a large stone mortar evidently hewn out of a portion of a fluted pilaster and beneath it a *denarius* of Vespasian. The floor on site VIB was also partly capped with material of a kind similar to that found on the floor immediately north of the footings (VIA) and resting upon this were the relatively large pieces of iron chain armour (Pl. III, Nos. 2, 3).

*Paved footways.* Sections of two of these were found. That on site I (Pl. II) was made up of four pieces of a column, all belonging together; a base moulding complete, and odd bits of tumbled sandstone. The upper surfaces of these stones were much worn. The other pavement (site III) consisted of a single line of ashlar-faced stones running almost due north and south, but these showed no trace of continuous use.

*Roofing tiles.* Thin slabs of micaceous sandstone may have been used sparingly; but none was found complete, and one only showed the nail-hole for attachment to the rafters. On the other hand broken red roofing tiles occurred freely over the whole of the area explored. Many bits of these tiles and also odd fragments of imbrices had a buff slip coating, a feature which Mr. Arthur Acton informs me is not uncommon on roofers made at the Roman tile kilns at Holt. Legionary stamps on these tiles are not very commonly found in this city, but we were fortunate in securing two complete ones and portions of others. The example herein illustrated (Pl. IV, Fig. 7) is of exceptional interest in having the legend retrograde and the background scored with fine horizontal lines.

*Wall plaster.* A quantity of this was found near the footings of the wall between sites V and VII. A few bits showed traces of dark red colour.

*Iron nails.* Large quantities of these were found, but they seemed most abundant in the trench north-east of the paved footway (site I), where over eighty examples were collected in one day. These vary in length from 6 inches to  $1\frac{1}{2}$  inches.



## COINS

The number of coins found during the excavations was 49, 12 being of silver and 37 of bronze. They include two very small hoards, of which the following summaries show how they were distributed respectively :—

(1) All third brasses, found immediately over the hearth-stone, site IV (see Plan).

Magnentius	1
Valens	3
Valentinian I	2
	<hr/>
	6
	<hr/>

(2) Pl. V, Fig. 1. Found together with a small bronze ring, site VIIA (Pl. II).

Vespasian ( <i>denarii</i> )	2
Antoninus Pius (2Æ)	1
Faustina, senior ( <i>denarius</i> )	1
Faustina, junior ( <i>denarius</i> )	1
Commodus ( <i>denarius</i> )	1
Septimius Severus ( <i>denarius</i> )	1
Caracalla ( <i>denarius</i> )	1
	<hr/>
	8
	<hr/>

The rest of the pieces seem to have been dropped promiscuously, and considering the smallness of the area explored, they are fairly representative of the period of the Roman occupation of the fortress, covering, as they do, the turn of the latter half of the first to nearly the close of the fourth century. The total number is divided as follows :—

Name and Date, A.D.	silver.	bronze.
Nero, 54-68	—	3
Vespasian, 69-79	2	—
Domitian, 81-96	—	1
Nerva, 96-98	—	2
Trajan, 98-117	1	2
Hadrian, 117-138	2	1
Antoninus Pius, 138-161	—	3



Name and Date A.D.	silver.	bronze.
Faustina, senior (died 141)	1	1
Faustina, junior, 141-175	1	—
Commodus, 177-192	1	—
Septimius Severus, 193-211	3	—
Caracalla, 211-217	1	—
Tetricus, 268-275	—	1
Carausius, 287-293	—	3
Constantine I, 306-337	—	2
Constantinopolis	—	1
Magnentius, 350-353	—	2
Valens, 364-378	—	4
Valentinian I, 364-375	—	2
Gratian, 367-383	—	1

Illegible :—

Radiate heads, 260-290	—	2	
No date assignable	—	6	
	—	—	
	12	37	Total, 49.
	—	—	

It is not thought desirable to give a descriptive catalogue of the coins in this report, but there are a few noteworthy pieces which may now be placed on record ; these are :—

(1) Vespasian (A.D. 69-79).

*Obv.* [IMP. CAE]SAR VESPSIAN[VS AVG.]. Head laureate, right.

*Rev.* IVDAEA. Judea captive seated right ; behind the figure, a trophy.

Cohen, 226. *AR* (*denarius*). Much worn. This is one of the pieces belonging to the small hoard (see Pl. V, Fig. 1).

(2) Antoninus Pius (A.D. 138-161).

*Obv.* ANTONINUS PIUS P.P. Head laureate, right.

*Rev.* SYRIA. In field S.C. (Cos. II in exergue is lost). Syria to left, holding crown and cornucopiae ; at her feet the river Orontes. I *Æ* (Sestertius). In almost mint condition. This fine piece came from site VII.

Cohen, 794.



## (3) Septimius Severus (A.D. 193-211).

*Obv.* L. S. SEVERUS . . . Head laureate, right.*Rev.* ? PAETMA . . . PVOI. Equitas left.*AR* (*denarius*).

Mr. Harold Mattingly, British Museum, to whom I am indebted for the determination of this piece, says that it is a very interesting barbarous imitation of the reverse AEQVITAS AVG. Equitas left. Presumably British. It was found a little south of site V.

(4) *Caracalla* (A.D. 211-217).*Obv.* [M. AVR.] ANTON. CAES. PONTIF. Young Barbarian bust, right.*Rev.* PRINCIPI IVENTVTIS. Emperor walking left, carrying rod and sceptre, behind him a trophy.Cohen, 506. *AR* (*denarius*).

This piece is in fine condition (see Pl. V, Fig. 1). It belongs to the small hoard found on site VIIA.

## COIN-MOULD

The obverse half of the leaden coin-mould illustrated on Pl. V, Fig. 4 was found on site VA, close up to the find-spot in which we got the two coins of Trajan. It bears the obverse impression (intaglio) of a coin of Sabina (A.D. 128-136). The legend reads SABINA AVGVSTA. The bust (to left, in mould) is diademed and draped. The mould is broadly ovate in outline, its greatest diameter being 4 cm. In section it is slightly wedge-shaped; its greatest thickness at one edge is 7 mm., the edge on the opposite side being only 3 mm. The thicker edge has been trimmed down with a sharp instrument. Below the bust is a funnel-shaped channel for pouring the material into it.

The channel or 'feed-hole' measures 9 mm. at the mouth, and 3 mm. at the edge of the impression of the coin. The outer surface or back of the mould is almost covered with fine sand, so that the lead appears to have been dusted with sand while still in a molten condition. There is no trace of the studs or impressions which may have served to fit the two halves of the mould together.



Moulds for producing coins by casting are, so far as I can ascertain, usually made of burnt clay, in order to resist the high temperature of the molten metal. The use of lead as a medium for a coin-mould puzzled me, and so I ventured to send a wax impression of our find to Mr. G. F. Hill, Keeper of Coins and Medals at the British Museum. This is what he says regarding the find: 'A leaden coin-mould is certainly interesting; I never remember hearing of such a thing. Because, the melting point of lead being so low, if you cast gold or silver into it, it would inevitably lose its surface if not melt altogether. (But I am no metallurgist and may be wrong.) It is not made for impressing in any other material, because there is the channel for pouring molten material into it. The date would probably be towards the end of Sabina's life—she died somewhere about 137 A.D. And the coin imitated is presumably a gold one of the Roman mint.'

#### POTTERY (*terra sigillata* or Samian)

This ware was rather scantily represented, and with few exceptions, occurred in very small sherds. The shapes which were definitely determined are given below, and the approximate number of vessels of each kind is placed in brackets after them:—

Dragendorff, forms 18 and 18/31 (8); 27 (4); 29 (6); 30 (1); 33 (6); 35 (1); 37 (20); and 38 (2). Déchelette, form 67 (5), and Curle, forms 11 (1) and 21 (2).

Three of the more interesting vessels are described below:—

(1) Form 29. Four early pieces all belonging together were found on site VII; one of them was embedded in the mortar forming the footings of the wall, the others were from a pocket of refuse immediately in advance of its southern face. The upper frieze (Pl. VIII, Fig. 10) has a simple stalked scroll with the spiral ending in a large rosette and a small '*astragalus* binding,' the blank spaces above and below with a seven-petalled rosette. Lower frieze (one small piece) showing panel divided by a wavy line and ending with a rosette, the space filled with arrow-heads (Oswald and Price, type 31). Associated finds: The bowl of Belgic ware and a piece of faceted glass (Pl. VIII, Figs. 8, 11), etc.

(2) Hemispherical bowl, Form 37 (Fig. 1). Height, 11 cm.; diameter,



21.5 cm. *Ovolo* border with the tongue ending in a large rosette. Decoration in metopes divided by wavy lines, mostly badly blurred and thus appear quite plain; angles with large rosettes. (i) Victory holding palm branch and wreath (Déch. 481, La Graufesenque). (ii) Divided;



Fig. 1—DECORATION ON SAMIAN BOWL. Scale  $\frac{1}{2}$ .

upper, incomplete, with festoon of large pointed leaves on the lower margin and short triangular florets on the upper margin, enclosing (?) bird to right; straight pendulous stalk from upper corners, ending in a truncate bud. (iii) Satyr to left (near Déch. 351, smaller); lower corners with tendrils ending in large rosettes. (iv) Lion attacking bestiarium (Curle, Newstead, 207, Nos. 1, 3; dated A.D. 80-100); upper corner (left) with two catkin-bearing tendrils; lower corners (left) with tendril ending in large rosette; in the centre, beneath lion, conventional plant (Déch. 1151). (v) Divided as in (ii), the festoon enclosing bird to left. (vi) Eros (Déch. 253, La Graufesenque, and Lezoux); lower corners with catkin-bearing tendrils. (vii) Lower portion of draped figure (? Diana and hind). Style similar to the bowls by Cosius and Mercator (Oswald and Price, XVI). Period probably Domitian-Trajanic. Associated finds: portions of the shallow dish (18) and the carinated bowl (29).

(3) Globular beaker, Form 67 (Pl. VIII, Fig. 9). Decoration in conventional plant ornament, *i.e.* tendrils ending in flowers or dentate leaves. The technique of this small piece is unusual, and the glaze very dark. It was found under a well-marked layer of gravel near the fibula with a tendril binding (Pl. VI, Fig. 5), etc.

(4) Form 35. A flanged bowl belonging to the *mortaria* class of vessels. It has a roughened interior and the glaze is dull, worn, and



pitted. The type from Rheinzabern, figured by Oswald and Price (Pl. LXXII, Fig. 10) is an almost exact parallel. It was found in the latest Roman deposit, and *above* the stratum in which a coin of Constantine I was found. The vessel, however, belongs to a much earlier period, possibly the closing years of the *sigillata* industry.

Four potters' stamps were found on this kind of ware. Those marked \* are new to the list for Chester.

DIVIC/. On 18/31. This is probably part of the stamp of Divicatus.

Walters (M1962) gives DIVICATI M on shape 31 and DIVICATUS (M2092) on shape 33. The latter agrees best with the Chester example. Bushe-Fox (*Wroxeter Report*, 1912) states that this stamp occurs in the Allier district and that it was found at Barhill, and probably belongs to the Antonine period. The stamp given by Curle (40) belongs probably to the same potter but is larger. Site I.

\*MASC[L]INI. On Form 18 or 18/31. This is rather a puzzle, but may be a variant of OF. MASCLI. (Masc(u)lus). Walters, M669. Site II.

\*MASCILLIO, Mascellio. On 18/31. A long narrow stamp within a broad rouletted ring, and a well-marked step at the junction of the side with the base. Oswald and Price (p. 205) give this from Lezoux. May and Hope (Carlisle) record a similar stamp on 33 and also give parallels from other Roman sites. Upper Roman stratum, site VII.

\*VERTECISA · F., Vertecisa f(ecit). On Form 33. Walters (M2193) gives this from London, and Bushe-Fox from Wroxeter (1913). See also C.I.L. Site V.

*Graffito.* The illustration (Fig. 2) is a facsimile of a legend scratched on the exterior of a *sigillata* cup (Form 27). It may represent the owner's name.

The restoration of this is hazardous, but it seems to read Amecu. Site VII, with the Belgic bowl (Pl. VIII), etc.

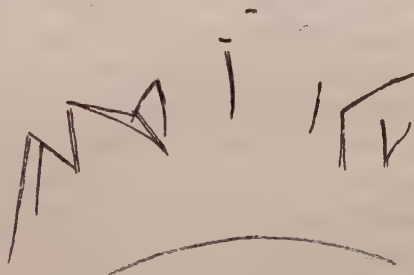


Fig. 2—GRAFFITO. Scale  $\frac{1}{2}$ .



## POTTERY (plain wares)

This kind of ware was found in a very fragmentary condition, and very few of the vessels represented admitted of reconstruction. All of the types found in well-stratified deposits or in the small pits of refuse in the sand floors admit of fairly close dating. A few examples, chosen in part for their significance in the dating of the site, and in part also for their intrinsic interest, are illustrated in this report.

*Mortaria* (Fig. 3, Nos. 1-9)

No. 1. Complete. Relatively soft cream-buff ware, with a texture and touch resembling 'bathbrick.' Grit particles very scanty or almost entirely absent from the lower portions of the interior; on the other

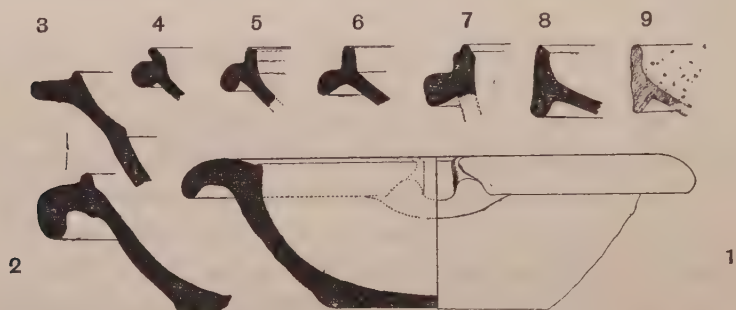


Fig. 3—MORTARIUM AND MORTARIA RIMS. Scale  $\frac{1}{2}$ .

hand the rim is thickly sprinkled. This is a close parallel to Bushe-Fox's type 18, dated to the close of the first century. Found under the footings at the eastern end of the wall, running between sites VIA and VIB (Pl. II), in association with pieces of the *sigillata* bowl (37), showing the wreaths figured by Walters (Nos. 10 and 12), and also a coin of Nero, etc.

No. 2. Brick-red, coated with smoky-buff slip; grit mixed blackish and white. Bushe-Fox, type 102, dated latter part of second and in the third century.

No. 3. Hard pale red clay; outer surface with orange-buff slip; inner with haematite. Grit-particles small, white. An apparently new type. Found in a pocket of refuse with fragments of other vessels including the rim of another mortarium resembling that from Potter's Burn (Bushe-Fox, No. 62), dated A.D. 120-180.



No. 4. Pale buff-red clay coated with warm buff slip ; brown grit inside.

No. 5. Hard pinkish-buff ware, with the quartzite particles extending to *rim and flange*. Bushe-Fox, type 150 (Caerwent). Surface of latest Roman stratum.

No. 6. Fine, hard brick-red ware coated with orange-red slip. Rim carelessly turned down to form a spout. Bushe-Fox, type 150 (Caerwent). Near coin with radiate head (A.D. 260-290).

No. 7. A small rim fragment in hard buff-white clay. No date can be assigned to this peculiar form as it was found when filling in the trenches, but it appears to belong to the later period of the occupation.

No. 8. Hard white clay. Large blackish grit. Exterior of rim painted with vertical bands of buff-brown slip, arranged closely together. With coin of Valens.

No. 9. Hard white clay with brown grit extending to rim and flange. Bushe-Fox, type 222 (Caerwent). Found lying near the coin of Gratian.

Other examples of this late type of *mortarium* or slight variants of it were also found, with the rims decorated with vertical or oblique stripes of dull red. The more or less datable pieces were : two with a coin of Constantine I.

## CUPS, COOKING-POTS, ETC. (Pls. VIII and IX)

### Plate VIII

No. 1. The rim and side fragments of a small thin-walled *olla* with a hard metallic-brown glaze, resembling Rhenish ware, having a groove at the shoulder and finely rough cast. The vessel figured by May (Silchester, No. 46) is an almost exact parallel ; it is dated as belonging to the early Claudian period. Site VII.

No. 2. Small *olla* with a narrow oblique rim and two deep grooves above the shoulder. Fine, hard, buff-red ware. Site VII.

No. 3. Rim of cooking-pot, in hard, dull, orange-red ware. Site VII.

No. 4. Lamp with the nozzle and upper portion of the handle missing. Brick-red, slip-coated with pale slaty-drab. It belongs to Walter's Romano-British type No. 93, which is dated as belonging to the first century. But the Chester example appears to belong to a much later



period, as a coin of Constantine I was found in association with it. Found at the southern end of site VI.

No. 5. Cup. Imitation of Dragendorff, Form 24/25, but the upper portion is strongly incurved and there is a deep groove below the rim. Fine, hard, gritty, grey ware. Site VII, in association with Nos. 8, 11. I can find no exact parallel for this interesting piece.

No. 6. Small cup of fine buff-red ware, with a deep groove inside the overhanging rim and base. I can find no exact parallel for this rather singular vessel, but Mr. Arthur Acton informs me that it is a Holt type. Site VA, with coins (two) of Trajan, and some sherds belonging to fumed grey ware with applied, rugulose surfaces ('Rustic ware').

Nos. 7, 7A. Belgic ware. Cup in imitation of the Form 24/25. Very hard, gritty, orange-red ware. Inside the base is a beautifully formed, foot-shaped stamp bearing the letters LV and surrounded by rather widely separated rings. Four pieces conjoined, representing about two-thirds of the cup. Find-spot the sand floor, site VI; in a small collection of refuse including the bronze sheath for a *dolabra* (text, Fig. 6, p. 81). I can find no parallel for this stamp, and Mr. A. G. K. Hayter, to whom I sent a wax impression, was also unable to help me, but he very kindly gave me some interesting information of which the following is the text: 'You need have no doubt of its being a Belgic pot. Ritterling (Hofheim, p. 339) found an example of Dragendorff 24/25, in "orange-red" Belgic ware, which he dates to the first fort, viz., A.D. 41-54. However, the shape runs on into the Neronian period (54-68). Drexel in O. R. L. Stockstadt, p. 98, says it dies out at the latest in the early Vespasian period. So too does the *planta pedis* stamp, if not indeed under Nero.'

Though it is somewhat difficult to get the *terminus ad quem* for this vessel, it would seem not to be later than the turn of the latter half of the first century, and it may indeed date back to the advent of the legions, A.D. 43.

No. 11, 11A. Belgic ware. An imitation of Dragendorff, Form 29. Buff-white paste with, in places, a darker core. Glaze dull, brownish-black ('bitumen coated'), but very little trace of it on the interior. Decoration: upper frieze with a row of concentric semicircles, engraved with a compass; lower frieze with similar semicircles arranged in rather widely separated groups of three. Seven pieces, including the whole of the base, conjoined; two of the rim-fragments found embedded in

the mortar in the footing of the wall, the rest of the pieces from the pocket of refuse (site VII). Associated finds: pieces of the *sigillata* bowl (Pl. VIII, Fig. 10); the fragment of a glass beaker (Pl. VIII, Fig. 8), etc. This interesting bowl seems to be a quite typical example of Belgic ware, and an obvious imitation of the *sigillata* bowl peculiar to the first century. It appears to belong to the Flavian period, and is the first example of 'terra nigra' found at Chester.

### Plate IX

No. 1. Cooking-pot of coarse, soft, jet-like ware with a free admixture of shell-fragments (*Cardium*, etc.). Site I, with the coin of Gratian, A.D. 367-383.

No. 2. Cooking-pot of jet-like ware with an admixture of white granular particles. Site V, with a coin of Constantinopolis.

A freshly-cut section of this and the preceding vessel (No. 1) polished quite easily, by friction on a rough cloth. They both belong to the hook-rimmed type of vessels found at Corbridge (*Report*, 1911, No. 67), which are there stated to be 'characteristic of the late third and fourth century cooking pots.'

No. 4. Fragment of an urn or storage jar of unusual shape. It is of fine buff-coloured ware, has a strongly incurved double-beaded rim and high shoulder. Found on site III with the stamp MASC[L]INI.

Variants of this type (No. 3) have been found elsewhere in Chester. They appear to belong to the same class of vessel as that described by Curle (p. 245, Fig. 23), but No. 4 is evidently of a later date than Curle's.

No. 5. Cooking-pot in fumed grey ware, with weak beaded rim and suddenly bulging body; the exterior decorated with groups of studs in horizontal rows, alternating with large circles, all in applied relief.

No. 6. Cooking-pot with globular body and small beaded rim. Shoulder burnished, body-zone with a pattern of latticed lines. Dark fumed grey ware.

This and the preceding vessel were found in a small pocket of refuse immediately north of site VI. Portions of other vessels found with them belonged to typical first-century forms.



Fig. 4. Fragment of urn with a carinated shoulder and oblique rim. Hard pale brown, gritty core, surface with a dull black polish. From



Fig. 4—RIM FRAGMENT OF URN. Scale  $\frac{1}{4}$ .

the lowest Roman stratum (site III) in association with a piece of the *sigillata* cup, from 27, and the rim-fragment of a large carinated bowl.

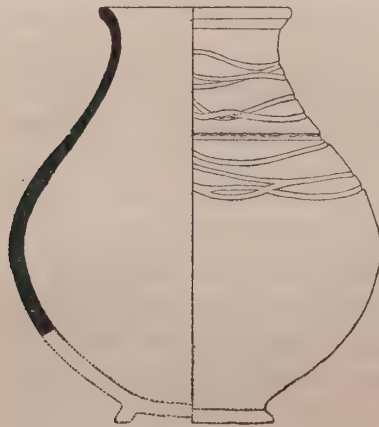


Fig. 5—Scale  $\frac{1}{4}$ .

It appears to belong to the type of cooking-pot described in the Guildhall catalogue (p. 18, No. 275, Pl. VI, No. 9) as late Celtic. May and Hope (Carlisle No. 167) also figure a similar example.

Fig. 5 (Text). A large narrow-necked *olla* with a zone of irregular wavy incisions both above and below the groove at the shoulder. Fine, gritty, buff-red ware. It seems to possess late Celtic features. The shape is unusual, but not unlike that figured by May (*Silchester*, LXXVI, 9) which is attributed to the first century. Find-spot, site II, with the fragment of *sigillata*, Pl. VIII, Fig. 9.

## GLASS

Some bits of typically blue glass were found, many of them belonging apparently to square-sided bottles, but the more important finds were two blackish counters, used probably in a game of chance or skill, and

a side fragment of a faceted beaker (Pl. VIII, Fig. 8) in clear glass, but with a ground surface beyond the facets externally (site VII). Of window glass there were nine fairly large pieces—one from site V, the others were all found together towards the eastern end of the wall between sites VIA and VIB, in association with a coin of Trajan (Cos. III).

### MILITARY DECORATION

The military badge or *phalara* (Pl. V, Figs. 3 and 3A) is a relic of exceptional interest. It was found on site V, on the 2nd June 1923. This consists of a thin circular disc of sheet bronze, 4·8 cm. in diameter silvered on the outer or inscribed surface, and has a series of holes punched all round near the edge, for attachment to the dress. It bears the following inscription in punctured letters, arranged in three lines :—

LEGXX  
IVLICA  
NDIDI

Leg(io) XX. Juli Candidi (the A is in a cursive hand), *i.e.* ' (The badge of) Julius Candidus (soldier of the) Twentieth Legion.'

A most interesting account of these and other decorations (*dona militaria*) is given by Steiner.<sup>1</sup> This author states that the *phalarae* were used as a very ancient form of decoration by the Scythians and Greeks, and that they arose from the necessity of fastening the joints of harness together, and that in very early times they seem also to have been used as a parting gift to guests.

In Roman Imperial times the minor decorations—*phalarae*, *armillae*, and *torques*—were given to soldiers of the lower ranks, including the centurions. Steiner (*l.c.*) gives illustrations of a number of monuments, including that of the tombstone erected to the memory of M. Caelius, a centurion of the eighteenth legion, 'who lost his life when that corps was cut to pieces in the defeat of Varus by the Germans' (A.D. 9).<sup>2</sup> On the breast of the effigy are five *phalarae*, decorated with gorgons' heads in high relief; the figure also wears *armillae*, *torques* on both shoulders, and the *corona civica*. In nearly all cases the *phalarae* seem to have

1. *Bonner Jahrbuch*. Heft 114/115, 1906, p. 14.

2. Stuart Jones, *Companion to Roman History*, p. 204, Fig. 36.



been worn in sets of uneven numbers—three, five, or more usually nine; and they were attached to the intersecting joints of a framework of straps.

Of actual *phalarae* very few examples seem to have been preserved, but there is the well-known and highly decorative set from Rhenish Prussia, now in Berlin. On the face of one of these examples is the name, in punctured letters—G. FLAVI FESTI, and on the backs of all of them—MEDAMI. Of the quite plain forms there is the set of nine described by Curle<sup>1</sup> from the Roman Frontier fort of Newstead; on the backs of these is scratched 'the name of the man DOMETIVS or probably DOMITIVS ATTICVS—whose dress they doubtless adorned.' In all the existing examples, however, the name of the legion is omitted. Thus the *phalara* from Chester seems to be unparalleled.

The associated finds were: pieces of the *sigillata* bowl (Curle, type 21) and pieces of 18/31. The badge may therefore belong to the Antonine period or the closing years of the second century.

In the light of this discovery at Chester it is tempting to suggest that the centurial stone found *in situ* in Hadrian's wall near Housesteads, belongs to the Twentieth Legion. The inscription on the stone reads:—<sup>2</sup>

OIULI  
CANDID/  
F.

A *phalara* of rather singular workmanship came from a spot a little south-west of site V. It is made from a thin sheet of bronze, and is shaped somewhat like a circular umbo of a shield in miniature. It has a circular, raised disc, 4 cm. in diameter, with vertical sides (12 mm. high), and a central hemispherical boss. The disc is closely surrounded by a strongly defined band (13 mm. wide) formed by folding the metal, from which the broad flat flange (13 mm. wide) suddenly slopes away. One may, in the absence of an illustration, liken the relic to a miniature low-crowned hat, with a broad rim and band complete. Its greatest diameter measures 7.5 cm. about. It seems to have been attached to a very thin sheet of iron, of which traces remain, and also to have had a backing or

1. *A Roman Frontier Post and its People*, 1911, p. 175.

2. Taylor and Collingwood, *Jour. Rom. Studies*, 1921, p. 237.

infilling of a substance resembling gypsum. The use of this object is not sufficiently obvious, but if it were used as a mounting for harness, it must have been fixed where there was little or no strain. From a deposit dated about the beginning of the second century.

## ARMOUR

### Plate III

Two kinds of iron armour were found on this site, and three of the pieces are illustrated on Pl. III, Figs. 1-3.

(1) Scale armour (*Lorica squamata*). The only example of this kind (No. 1) is but a small fragment, in very poor condition, representing two practically complete scales and fragments of others. The scales are fastened together by iron wire rings, the cut ends of which either meet together or overlap each other. The individual scales are somewhat rectangular in outline, narrowed and square ended proximally, and broadened distally and rounded. In its general structure this piece is paralleled by a much finer example of iron scale armour found by myself in Hunter Street, Chester, in 1914. The occurrence of scale armour of bronze or brass has been recorded from several Roman sites in Britain and also on the continent of Europe. But by far the most important discovery of this type of armour was made at the Fort of Newstead in the parish of Melrose (Curle, p. 158, Pl. XXV) where 346 brass armour scales were found in the *Principia*. So far as one can discover, however, there seem to be no published records of specimens in iron, found either in Great Britain, Germany, France, or Italy. Extant specimens seem to have turned up chiefly on Scythian territory, in which region scale armour of various kinds seems to have originated. E. H. Minns (*Scythian and Greeks*) mentions it again and again in the Roumanian finds. These specimens are of bronze and bone (p. 187), iron (p. 250); sometimes it is composite (gilt iron and bronze, p. 206); more than one specimen seems to have had copper scales on the shoulders and around the lower edge, while the rest of the scales were of iron (pp. 224, 229).

The piece herein described came from site VA (see plan No. 2) and was associated with coins (two) of Trajan. It may therefore belong to the first half of the second century.

(2) Iron chain armour (*Lorica hamata*). Several nodular masses of



iron resembling iron slag were found lying together on the sand floor of the room on site VIB. On treating these shapeless bits of iron with acid, to remove the earthy matter, the iron proved to be compact, folded masses of chain armour, the total weight of which amounted to about 20 oz. But, owing to corrosion, it was quite impossible to separate any one of the rings, though in six instances the diameter could be measured and these varied from 9 to 7 mm. Two of the pieces from this site are figured on Pl. III, Fig. 3.

The discovery of the foregoing mass of chain armour led me to make a critical examination of all the samples of iron slag which had been put aside for analysis; this revealed the presence of two additional bits of this kind of armour. Unfortunately I cannot now tell from which site these pieces came, but as they were found at the beginning of our excavations, they must have come from the sites considerably west of VIB. The diameter of five of the rings in one of the pieces measured 6.5 mm. and 3 mm. respectively. In one case two of the smaller rings are attached to and lie one on either side of the larger. Altogether this piece of mail seems to be of a closer and more compact nature than the others. In another example, the rings are so firmly fused together by rust that one can but just trace them.

(3) Chain armour of iron and brass. One small mass with the links all fused together by rust is illustrated on Pl. III, Fig. 2. This piece has a single row of nine well-preserved brass rings passing right across the shortest axis of the mass. These brass rings are flush-jointed, that is, the two cut ends meet together, they are not riveted as are other known examples. This example came from the site near the footings of the wall, about 8 ft. east of site VIB, and therefore within the same floor area from which the examples No. 2 came.

The datable objects found in association were the *mortarium* (No. 1) and the coin of Nero. The armour may therefore belong to the closing years of the first century.

#### *Ballista* balls (Pl. IV, Fig. 1)

A hoard of roughly worked bits of sandstone was found in a late deposit on site VB, near the coin of Constantinopolis. Thirty-three of the more perfect examples were preserved and a selection of these are shown in the illustration. These vary in shape, but many are roughly obconical and a few are angular or cube-like. Nearly all have one

roughly flattened surface or base. The example in the illustration, which is seen to be a little more pointed than the rest, is 10.5 cm. in height and 9.3 cm. in greatest width. This example weighs 24 oz. Odd examples of similar worked stones were found elsewhere. One large example, found on site IV, is much more carefully finished, the whole surface being pitted with 'punch marks.' This example is more or less hemispherical, its greatest diameter is 10.5 cm.; its height 10.2 cm.; the weight when soaked with water  $3\frac{1}{2}$  lb.

I take it as a fair inference that these objects may have been intended for use as projectiles for a *ballista*.

## BRONZE ORNAMENTS, BROOCHES (*Fibulae*), ETC. (Pls. VI and VII)

### Plate VI

Nos. 5, 5A, 5B. The fibula with 'tendrill' binding is an almost exact parallel of the types described by Tischler,<sup>1</sup> and Daremberg and Saglio<sup>2</sup> respectively. This form of brooch is rare and does not appear to have been found hitherto on Romano-British sites. It is strikingly characteristic in having the foot or catchplate bent back and fastened to the bow (proximally) by a 'tendrill' of wire, the bow, catchplate, and binding being formed of one continuous piece of metal. The spring, which is open, has five coils on one side and apparently four on the other. The decoration immediately in advance of the tendrill-binding is shown in No. 5B. At the heel or proximal part of the bow, just above the spring, are two intersecting lines, forming an X, on a flattened and slightly raised surface. Total length, 5.3 cm.; height from pin to top of bow, 2 cm. approximately.

This example came from a lower stratum and beneath a fairly well defined layer of gravel on site II (Plate II). The associated finds were: *sigillata* vessels, Dragendorff, Form 29 (one small bit of rim); 37 (two small bits showing transitional decoration); the piece belonging to the vessel (67) shown on Pl. VIII, Fig. 9, also many pieces of grey cooking-pots with applied rugulose surfaces and a piece of Curle's flanged *sigillata* bowl (type 11) dated A.D. 80-100. It may, therefore, be taken as a fair inference that the brooch belongs to the closing years of the first or the early years of the second century. This, however, rather

1. *Beiträge zur Anthropologie und Urgeschichte Bayerns*, Bd. IV, 1881, Fig. III, p. 75.  
2. *Dict. Antiq. Grec. Romaine*, 3013.



upsets its previous dating, as the German and other authorities place it at the end of the second and usually in the third century.

No. 4. This bow and catchplate of a brooch came from site I; it is an early form and seems to have had a partly closed spring. The only other brooch found (No. 3) has lost its pin; it is a small example of the penannular type and shaped somewhat like the example figured by Curle (Pl. LXXXVIII, Fig. 11) but the terminals are longer. From a late deposit, site V.

No. 2. This small pendant is the only example of enamelled bronze found. It came from a late deposit north-east of the paved footway, site I. The colours, though badly preserved, are arranged as follows: centre, bright vermillion; the concentric ring, peacock green; the marginal band, cobalt blue, with white at the lateral angles.

No. 1 is a circular stud, probably used as an ornament for a strap. So also were the two objects (Pl. VII, Figs. 2 and 7), as both have short tangs at the back for attachment. The former is silvered and has a punctured pattern of two scrolls separated by a central line (site VII).

No. 9, bottom. Portion of bronze armlet or torc. From a late deposit, site I.

Nos. 8 and 10. Buckles of bronze. No. 10 was found under the hearth-stone. Site IV.

Nos. 6 and 7. Beads. The cylindrical one is crudely made, but a rather uncommon type. The melon-shaped one was from site VI.

No. 9. Rings, top. These are without decoration. Other examples were also found.

## Plate VII

No. 5. A semicircular piece of silvered bronze, of unknown use.

No. 6. This may have served to suspend light ornaments of some kind, or as one of a pair of clasps for fastening a light garment; the heart-shaped plate is pierced near the apex and the upturned clip or hook is decorated with a chevron-like pattern. Site V, with the coin of Constantine I.

No. 13. Part of a bronze hinge, decorated with dot and ring, and ring with four equidistant piercings. It seems to have been attached to a metal box or casket, as it has traces of thin sheet-iron still attached to the back.

No. 14. Small bronze weight for a plumb-line.

Nos. 10 and 18. Parts of two bronze ferrules.

No. 15. Bronze tang-end for strap.

Nos. 11, 12, 16, 17, 19, 20. Bronze nails and studs. No. 16 has a backing of material resembling gypsum, No. 20 bears traces of blue glass enamel, the interior filled with the same kind of substance as Fig. 16.

No. 9. Lug or hook for attachment to small vessel.

No. 3. Bronze pin (incomplete).

The bronze object (Fig. 6) is described as a sheath for a pioneer's axe (*dolabra*). The lateral moveable arms, with upturned hooks, are secured to the transverse portion by strong rivets, which latter originally passed through a block of wood of which traces remained. Curle (p. 279) gives an interesting account of similar sheaths found in the bed of the Rhine. He also figures two

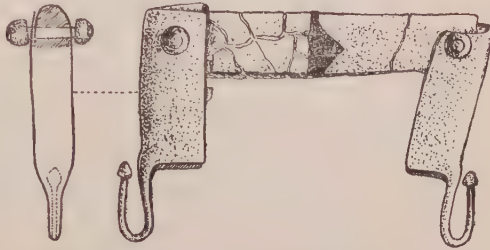


Fig. 6—SHEATH FOR PIONEER'S AXE. Scale  $\frac{1}{2}$ .

examples 'recovered from the *Schutthügel* at Vindonissa'; and his fig. 2 resembles our example very closely. Found in the small pocket of refuse, site VI, together with the Belgic cup bearing the potter's name LV in the footprint stamp; a melon-shaped bead (Pl. VI, Fig. 6), etc. Unfortunately the transverse portion of the sheath got badly broken, and owing to its fragile condition it seems impossible to mend it. It measures 6.2 cm. from the bottom of the hooks to the front edge, and 9.5 cm. in its greatest width, approximately. I can find no parallel to this interesting object from other Romano-British sites.

The ferrule-like object in bronze (Fig. 7) is of doubtful use. It has a flat, circular disc at the narrow end, and at the other end it is decorated with two bands of fine grooves. Length, 9.5 cm.; diameter at end, 1.8 cm. In a late deposit, site I.



Fig. 7—BRONZE FERRULE. Scale  $\frac{1}{2}$ .

The solid object of bronze (Pl. V, Fig. 2) may have been used as a terminal for the leg of a seat.

The solid object of bronze (Pl. V, Fig. 2) may have been used as a terminal for the leg of a seat.



Seal lock of bone (Fig. 8). This is quite a miniature example of a well-known type of lock. It resembles very closely the specimen illustrated in *A Guide to Greek and Roman Life* (British Museum), p. 154,

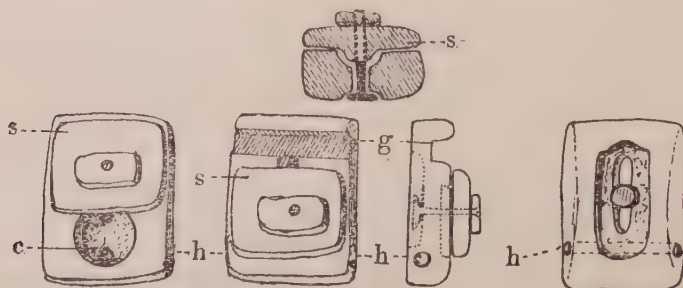


Fig. 8—SEAL LOCK OF BONE. Scale  $\frac{1}{2}$ .

fig. 191. But our specimen is much smaller. It consists of two main parts—a fixed base with a broad groove (*g*) near one end, and a small boring (*h*) at the other; between these two is a narrow slit. The other part is a moveable slide (*s*) held in position by a bronze pin, which latter slides up and down the central slit in the basal part. When in use the cord or string was passed through the hole at one end and another cord or staple placed in the broad groove at the other end. To secure the lock, the slide was pushed forward so as to cover the cord or other fastening; wax was placed in the circular cavity behind it (*c*) and sealed. To unfasten the lock it would be necessary to break the seal, otherwise the slide (*s*) could not be pushed back and the fastening (staple or cord) liberated. The drawings are all actual size. Site VII.

#### TOOLS, IMPLEMENTS, ETC.

A shoemaker's awl with handle and shaft of solid iron, 14.5 cm. in length, was found in the lower stratum on site IV. Curle (Pl. LIX, fig. 16, p. 281) describes a precisely similar tool as 'a good specimen of an awl with a metal haft . . . measuring  $4\frac{1}{2}$  inches in length, probably belonged to a shoemaker.' Other objects found, and not illustrated in this report, are: Blade of moulding plane, with the cutting edge deeply emarginate and the upper end square in section. This came from the trench, site I. An iron shod for a slender pole; an iron hook for suspending a lamp; figure of eight link of chain, staples, and hooks; iron bolt of lock; iron key; and scraps of iron and bronze.

Knives (Fig. 9, Nos. 1-3) :—

No. 1. A large example with a triangular blade and rounded deer-horn handle. Total length, 21 cm. (8·2 inches), of which the cutting

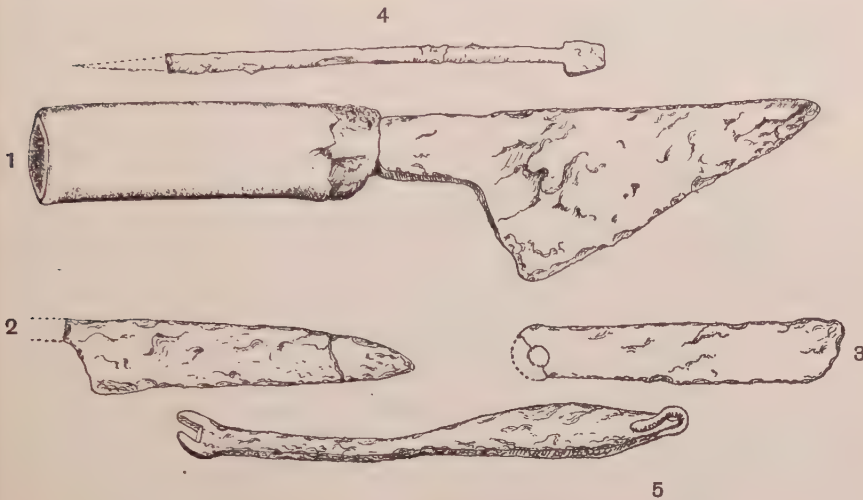


Fig. 9—STYLUS, KNIVES AND NAIL EXTRACTOR. Scale  $\frac{1}{2}$ .

edge measures 9·3 cm. This is the type of knife described and figured by Curle (Pl. LX, Fig. 7). It was found in a deposit containing bits of mortaria dating to the third or fourth century. Site VII.

No. 2. Knife-blade with the tang end broken away. Site V.

No. 3. Tang end of knife with loop for suspension. Site V.

Iron stylus (Fig. 9, No. 4) with the pointed end broken away. It bears no trace of decoration, but the eraser end is of the typically broad pattern. This, the only example, came from site V, and was associated with other objects of iron—a staple, a shod, and odd bits of scrap iron.

Iron implement (Fig. 9, No. 5) for extracting nails, with hook at end for suspension.

Fig. 10. This gives the plan and elevation of an object in bone which has been turned on a lathe. It is somewhat hemispherical in shape, has a deep and relatively broad groove towards the base, one hair-line below the latter, and seven lines above it, six of which are arranged in widely separated pairs. A vertical boring, 17 mm. in diameter, passes right through the centre; and there are three, smaller, equidistant borings, 3·1 cm. in depth, from the base upwards. In one of the smaller borings was a lead dowel exactly filling the



cavity; this on removal

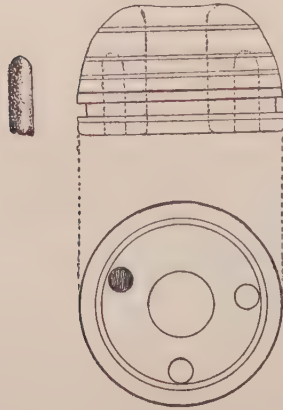


Fig. 10. Scale  $\frac{1}{2}$ .

showed evident signs of having been poured into the boring while in a molten state; its proximal end has an uneven surface and appears to have been broken away. The upper surface (top) of the central boring is much pitted and worn as if it had been pricked by a sharp pointed instrument. The presence of the lead dowel suggests that the whole of the base, including the deep groove, may have been covered with the same kind of material. Thus it would have done admirably for holding styli with the pointed ends resting on the softer metal. It may, of course, have been used as an inkpot, but if so it must have been a rather leaky concern. It came

from the refuse pit in the sand floor, site VII, with the early pottery described above.

Stone weight (Pl. IV, Fig. 3). This object, in local sandstone, is rough-hexagonal in shape, and on one of the facets are the numerals III shallowly cut on its surface. Its weight is  $32\frac{1}{2}$  oz., and its diameter 8.8 cm. There is no trace of a metal ring or staple for attachment to a steelyard, so that it could not have been used as a counterpoise for such an instrument. Professor E. Pernice<sup>1</sup> describes a spheroid stone weight which was found on the site of the Roman quay at Cologne. This example also bears a number of numerals in ligature, but it is a much heavier weight (6700 gr.) and has traces of an iron attachment.

Lead weight or counterpoise for steelyard (Pl. IV, Fig. 2). This weighs 6 lb. 4 oz. It has portions of the iron staple for suspension still remaining. It is pierced obliquely, and has four irregular punch-marks near the opening. The side opposite to that seen in the illustration is relatively flat.

Plano-convex discs of lead (Pl. IV, Figs. 4-6). These objects are not uncommonly met with in Chester, and several examples were found in the Deanery Field. They vary slightly both in weight and diameter,

1. *Bonner Jahrbuch*. Heft 114/115, 1906, p. 434, with illustration.

but all are precisely similar in form and seem to have been made by pouring the molten metal into a small ladle or mould. Their use is doubtful. They could scarcely have been used as weights, as none bears any trace of numerals or lettering of any kind whatever. I have, so far, failed to find any parallels for these objects from other Roman sites, in the somewhat scanty literature at hand. Weight of the three examples illustrated, 15, 14, and 10 oz. respectively. Greatest diameter, 6 cm. (2) and 6.8 cm. (1).

Millstones or querns. One complete example was found resting on the rubble footings of the wall (site VI) and a section of another came from site VB. Both are in basalt lava, and seem to have been imported from the Rhine.

Hones or sharpening stones. Four examples of these were found. One is in fine micaceous grit, another in fine sedimentary rock. None, however, is of local origin and their exact formation may be difficult to trace.

Fragment of inscription. A small piece of a slate slab, 3 cm. thick, was found on site VIA, close up to the stone mortar. It bears portions of two lines of an inscription in well-cut letters, of which . . . VI . . . only are legible.

### ANIMAL REMAINS

The marine mollusca were scantily represented. A few oyster shells were found here and there; *Mytilus* was found more rarely, and *Cardium* but once, and that quite recently.

Two molar teeth of man, attached to the fragment of a lower jaw, were found soon after we commenced digging. Bones of the ox, apparently all belonging to the *longifrons* type, were found in abundance, and almost all of the long bones had been split for the sake of the marrow; several heads from the femora of this animal had been forcibly removed and may have been used as 'pieces' in a game of skill. Sheep or goat were not uncommon, but by far the most interesting remains was part of the skull of a hornless race. Sawn or cut ends of the antlers of the red deer occurred two or three times. Bones of the pig or wild boar were almost as numerous as those of the ox. The remains of the horse consisted of one molar and a portion of the lower jaw, representing a small race. Of the carnivorous beasts there were found the jaw of a cat and odd bones of the dog.



Birds were represented chiefly by the domestic fowl, the tarso-metatarsus of one or two examples showed a large development of the exostosis carrying spur. One or two long bones may be those of the pheasant and one apparently belongs to a species of *Anas*.

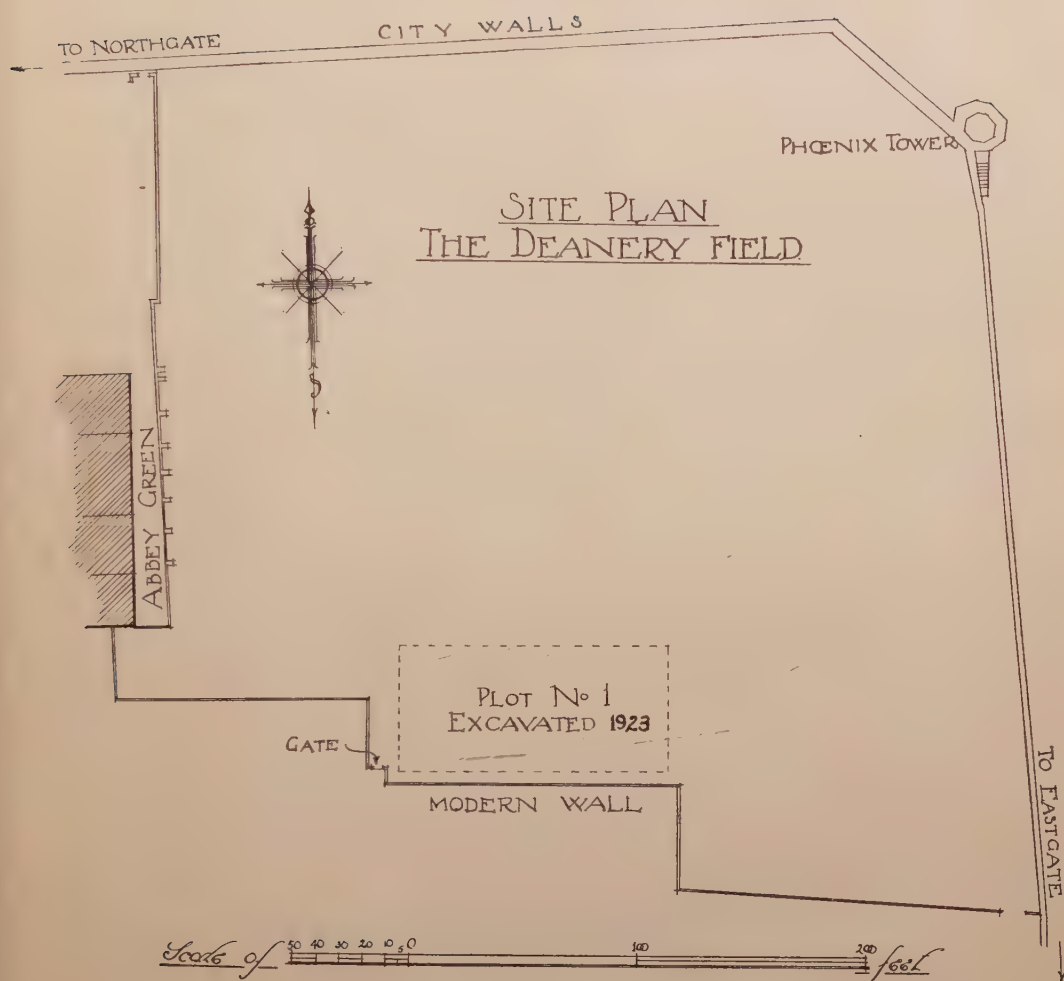
### MINERALS AND METALS

Coal was found very scantily indeed. Iron slag was not uncommon. Bronze dross was found once or twice, but in very small bits. Silver wire once. Odd bits of lead were common and usually in the form of waste cut from thin sheets.

### ACKNOWLEDGMENTS

I beg to record my gratitude to Mrs. Paget for her encouragement and help and also for her liberal contribution towards the funds for the excavation. Mr. T. Alfred Williams has helped materially in plotting out the architectural remains and has also prepared the plans which are embodied in this report. My thanks are also due to Mr. Harold Mattingly (British Museum) for his determination of nine of the coins, and to the Rev. J. R. Davis for checking an early list of the coins found on this site.

Our thanks must also be expressed to Mr. R. T. Wickham and the Rev. Canon P. J. B. Ffoulkes.

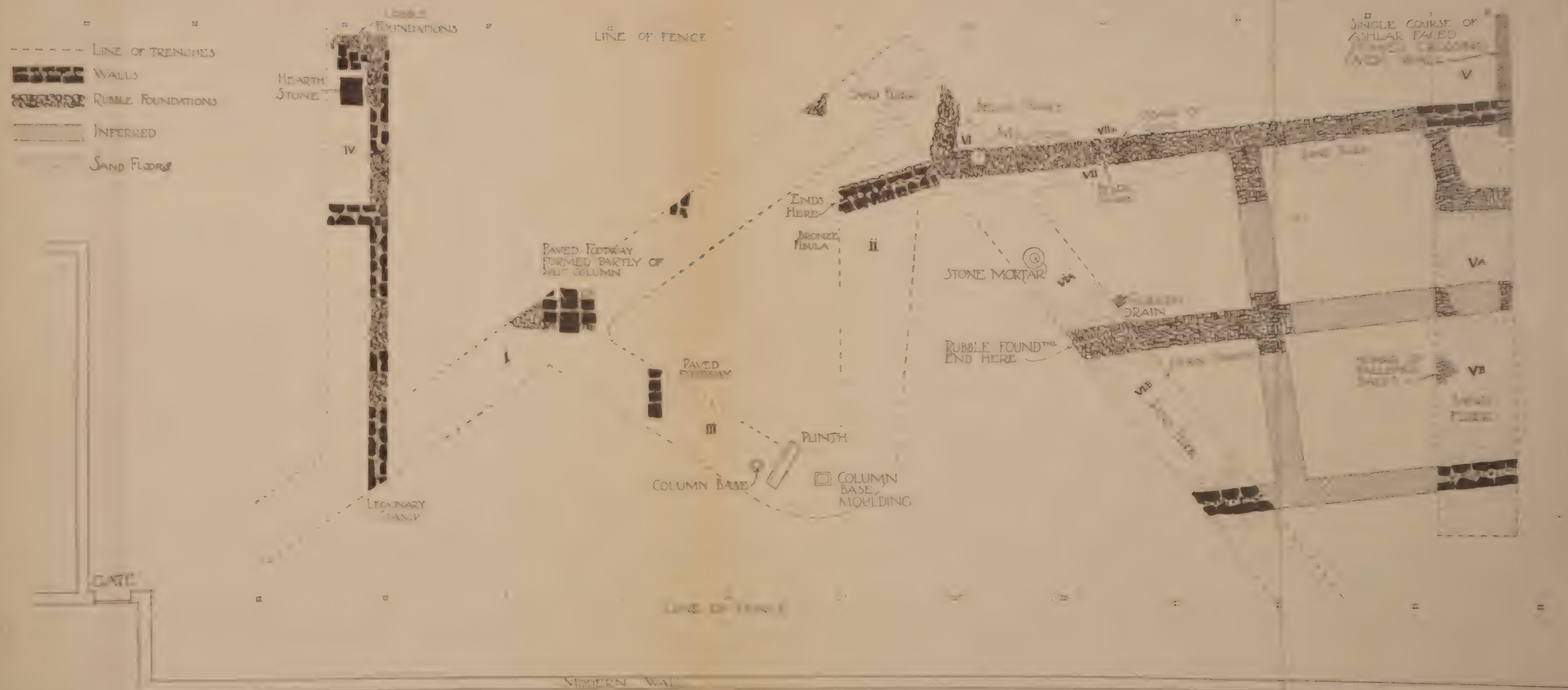


THE DEANERY FIELD, CHESTER





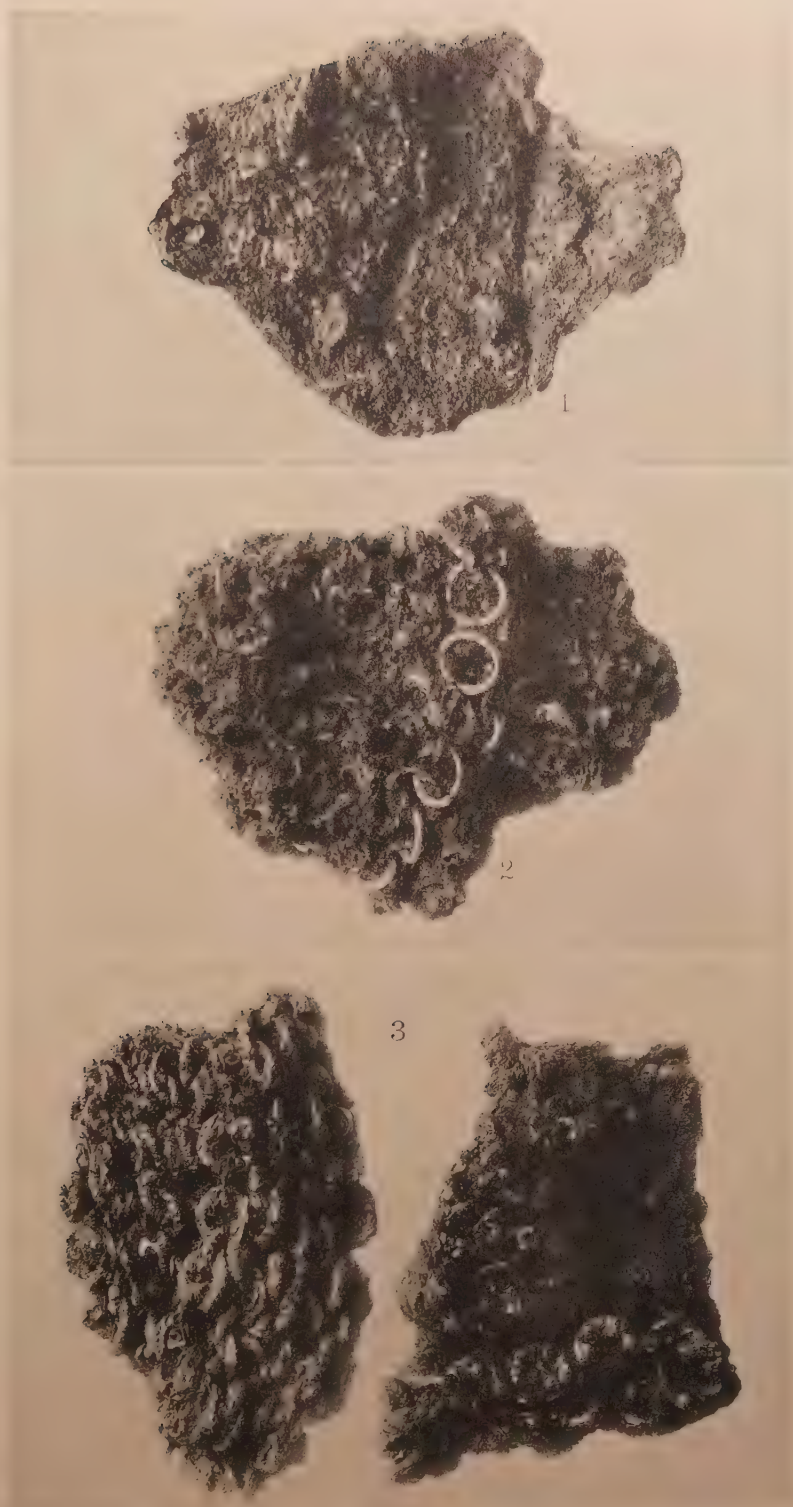
# PLAN OF FOUNDATIONS OF ROMAN BUILDINGS THE DEANERY FIELD, CHESTER, 1924.



Scale of 0 1 2 3 4 5 6 7 8 9 10 feet







THE DEANERY FIELD, CHESTER. ROMAN SCALE AND CHAIN ARMOUR OF IRON.  
Scale  $\frac{1}{2}$ .





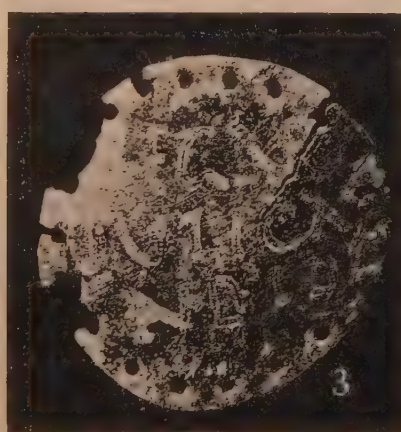
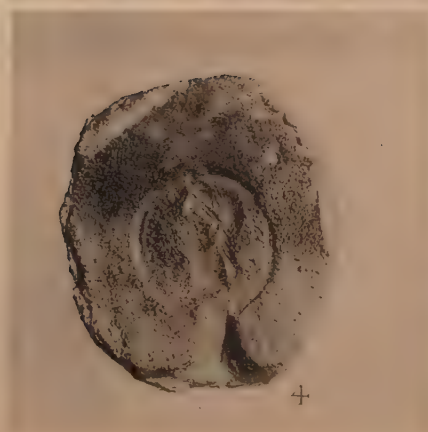
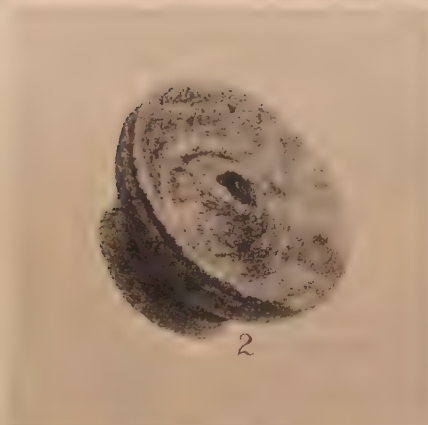


THE DEANERY FIELD, CHESTER. ROMAN BALLISTA BALLS, WEIGHTS, AND LEGIONARY STAMP.

Scale: Fig. 1, about  $\frac{1}{4}$ ; Figs. 2-6, about  $\frac{1}{2}$ ; Fig. 7, slightly reduced.





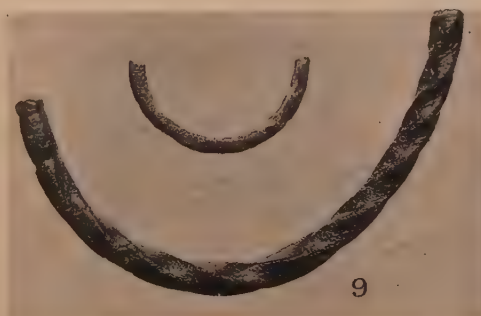
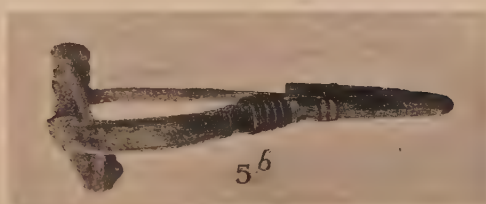


THE DEANERY FIELD, CHESTER: ROMAN COINS, COIN-MOULD, MILITARY BADGE, ETC.

Scale about  $\frac{1}{2}$ .



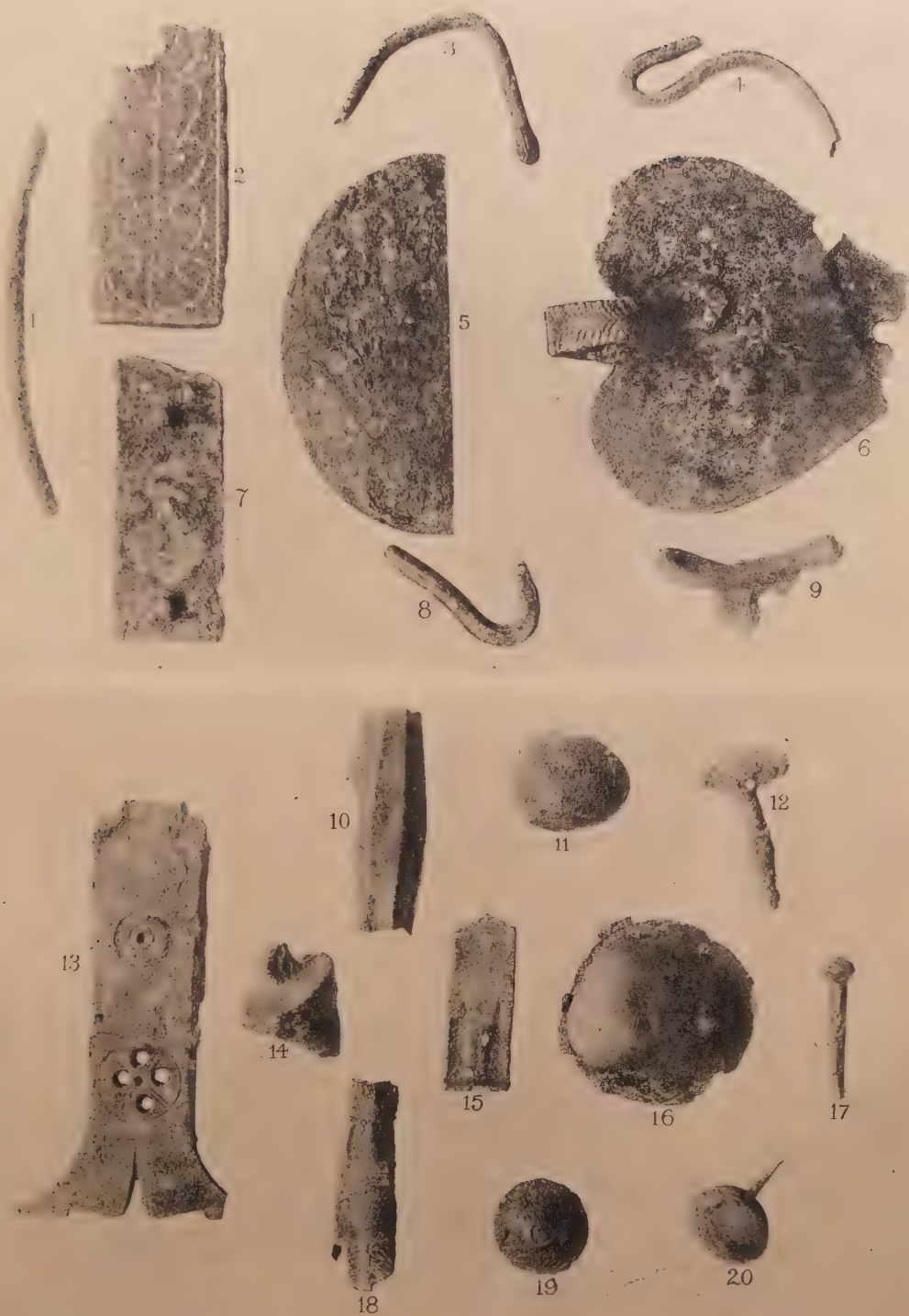




DEANERY FIELD, CHESTER. ROMAN PERSONAL ORNAMENTS, ETC.

Scale  $\frac{1}{2}$ .



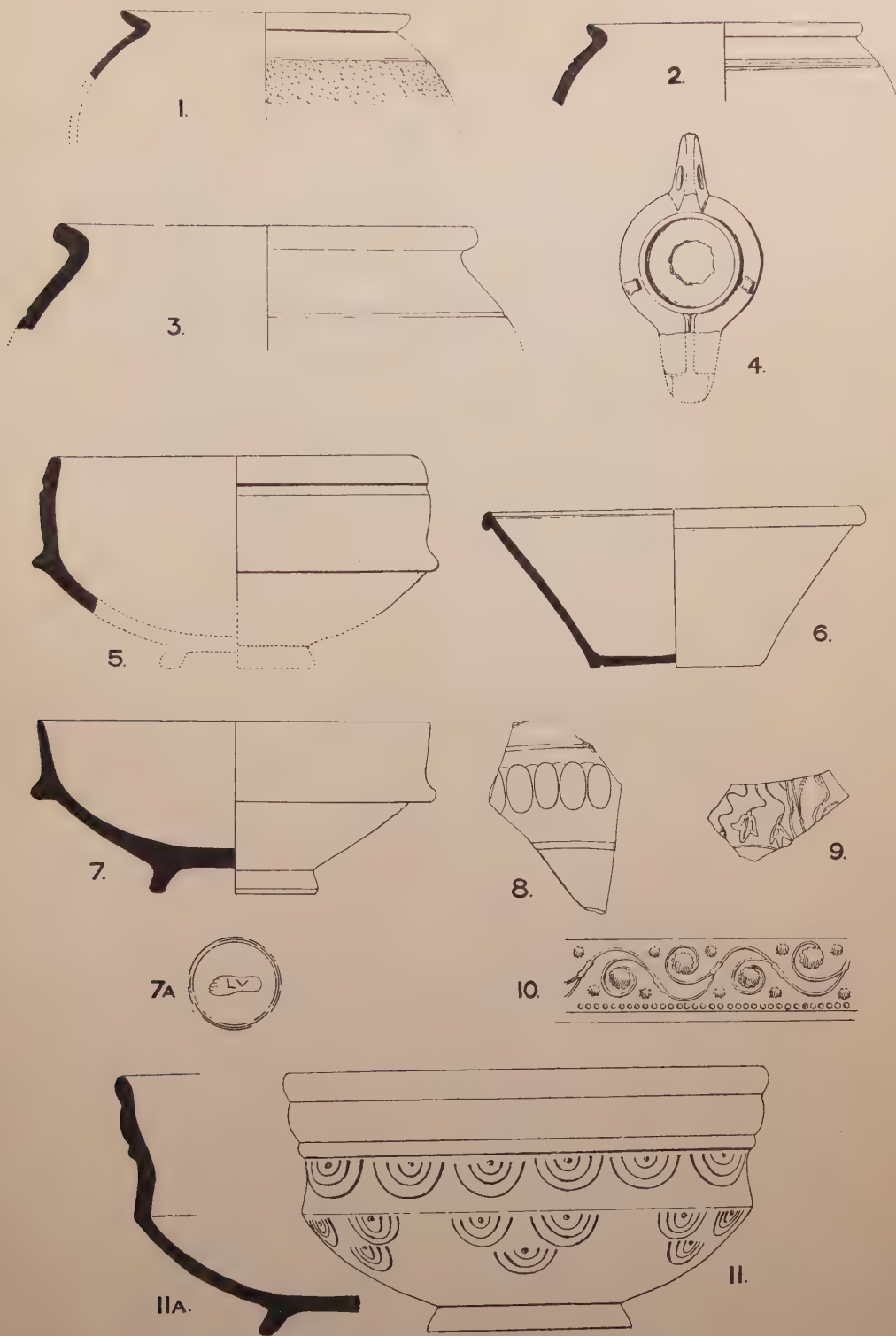


DEANERY FIELD, CHESTER. ROMAN OBJECTS OF BRONZE.

Scale  $\frac{7}{8}$





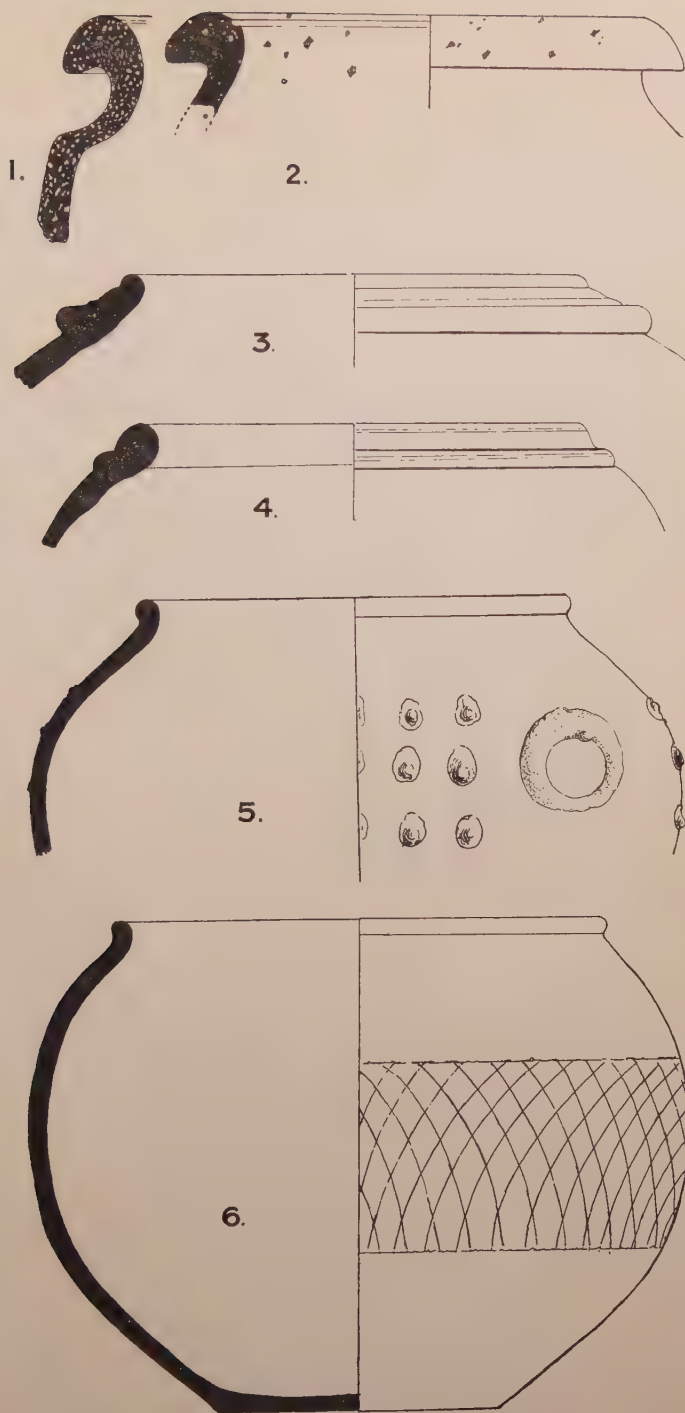


DEANERY FIELD, CHESTER. ROMAN POTTERY, ETC.

Scale  $\frac{1}{2}$ .







DEANERY FIELD, CHESTER. ROMAN POTTERY.

Scale  $\frac{1}{2}$ .



# A MUMMY FROM THE TORRES STRAITS

BY WARREN R. DAWSON, F.Z.S.

WITH PLATES X-XII

IN the British Museum (Natural History) is the mummy of a man labelled '84. 7. 21. 1. Native Mummy of a Chief, Torres Straits Islands' which was presented in 1884 by the Hon. John Douglas. I saw this mummy (which is not exhibited) for the first time about twenty years ago, but having in the meantime paid considerable attention to mummification in Egypt, I was very anxious to make a careful examination of the specimen, particularly in view of the researches of Prof. Elliot Smith, who has proved that certain distinctive practices adopted by the Egyptians during the XXIst Dynasty spread from Egypt and acquired a very wide geographical distribution. Certain mummies from the Torres Straits region which have already been examined reveal a most striking demonstration of Egyptian technique (Elliot Smith, *Migrations of Early Culture*, pp. 21 ff., 1915), and as the material available for examination is very limited (only five other specimens, as far as I can discover, being now in existence) it seemed that a description of the British Museum specimen would be a welcome addition to the scanty literature of the subject, especially as we are unlikely to be able to obtain any further specimens, for Drs. Myers and Haddon (*op. cit. infra*) state that the custom of mummification in the Torres Straits has now completely died out.

The body is that of an adult man in a fully extended attitude fixed to a rectangular frame made of bamboo poles (Pl. X). From this framework it was originally suspended by cords passed under the arm-pits and below the knees, which kept the body in the erect position. Although now lying horizontally it is necessary to bear in mind the attitude it assumed whilst undergoing the process of treatment, for the present state of the body, now hard and rigid, is conditioned by its former upright posture. The suspension from the arm-pits has kept the shoulders quite square and horizontal, but there has been a downward tendency of the body due to its own weight whilst still soft and plastic. The wrinkling of the skin



and the deep impressions made by the cords are plainly visible. The position of the body is that into which it would naturally fall whilst stretched on the frame. The head has dropped forwards and bends over the chest, the chin almost touching the latter. The knees have fallen into a slightly flexed position forwards. The skin is stretched tightly downwards and has wrinkled at the knees, and very considerably at the ankles. The arms hang straight down on either side of the trunk. The right hand is missing, the left hand has the palm turned backwards.

The whole body is thickly coated with red paint, except the head, which is painted black, but has a red line about 15 mm. wide running like a fillet round the head across the forehead. The flesh and skin of the face seem to have been treated with some oily or fatty matter which perhaps accounts for its darker colour. The lower jaw has now dropped on to the chest and the mouth is wide open, but it was originally kept shut by a string, like a fine fishing-line, which appears from under the upper lip, passes round the point of the chin, and returns to the inside of the mouth through a small hole in the floor of the mouth just behind the inside of the symphysis of the jaw. It is not possible to trace by what route the string (which is tied with a knot in front) passed through the roof of the mouth and out again to the lip, as it has broken off and lies inside the mouth. The tongue has not been excised, but its shrivelled remains lie *in situ*. The flesh on the face is very brittle and has flaked away in several places. The whole of the contents of the left orbit has fallen out, exposing the bone behind, and the lower jaw is almost entirely bare. Most of the teeth of the lower jaw have fallen out, but are preserved in a box with the specimen: they are all sound and healthy. The flesh of the jaw must have come away or decomposed before the mummy was finally dealt with by the embalmers, as a dab of bright red paint is clearly visible on the bare bone of the chin at the point where it nearly touches the breast. As the colour of the face is uniformly dark, this bright spot could only have been caused by a slight slip of the brush which applied the paint to the chest. The right orbit is filled with some dark paste (? resin) which is thickly laid on over the shrunken eye, and on this paste is the well-defined impression of an artificial eye, which has now fallen out, but is fortunately preserved. This eye is a fusiform plate of mother-of-pearl, 43 by 17 mm., the pupil being a circular blob of the same dark paste that fills the orbit.

Both ears have been completely excised. I thought at first that they

had been broken off, but the skin of the scalp has a sharply-cut edge, exactly corresponding in shape to the outer margin of the whole external ear, including the lobe. This excision was deliberately and carefully done before the mummy was completed, as the band of red paint which traverses the forehead is continued right across the sites of both ears. Through the excision of the left ear the mastoid process is visible.

The roof of the mouth is quite intact, and there is no visible passage, either natural or artificial, through which the brain could have been extracted, unless it was removed through the nostrils in the characteristic Egyptian fashion. The nose is very shapely, and has the septum intact, except for an oblong perforation at the tip through which a nose-stick ornament was passed. The fossae are tightly packed with black paste, and the nostrils widely dilated with a strong ridge on their outer margins. Owing to the packing of the nostrils I was unable to pass a probe up them to ascertain whether the ethmoid bone had been broken through and the nasal route used for extracting the brain. The wide dilation of the nostrils at first strongly suggested that such might have been the case, but I think the shape of the nose is largely due to the nose-ornament, for it *exactly* resembles the nose of a living man photograph <sup>d</sup> in Pl. I, Fig. 4 of the fourth volume of the Report of the Cambridge Expedition.<sup>1</sup> As there is no incision in the neck, the brain could not have been removed through the *foramen magnum* as was sometimes done. The top of the head is either quite bald or has been closely shaved, as no trace whatever of hair could be discerned in that region. On the back of the head, however, are abundant remains of closely-cropped hair, about 2 mm. or less in length, except here and there for a stray hair 50 mm. or so in length which had escaped the shears. The skin of the back of the head and neck is quite whole and strong.

The body-cavity has been completely emptied of all the viscera, both abdominal and thoracic. I carefully explored the whole cavity and found not a single trace. A plug of black material (? resinous paste) is pushed into the base of the neck. Two pieces of stick, about an inch in diameter, were found in the cavity. One of these was vertical, the top, which is sharpened to a point, being level with the breast, and the bottom thrust into the left thigh, but to what depth it was impossible to ascertain. The other, about nine inches in length, was thrust up the perineum

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1. *Reports of the Cambridge Anthropological Expedition to Torres Straits.* Hereafter cited as *Reports*.

through a perforation in that region. The perineal region is considerably damaged. It appears to have been perforated in several places, and the drainage of the fluid products of decomposition has reduced it to a state of disintegration. The penis and scrotum are both present *in situ* and painted red, but the state of preservation is not sufficiently good to justify a decisive opinion as to whether circumcision had been practised or not. There are scanty traces of pubic hair, but when the body was painted the normal hair must have been present, as there is very little red paint in the region. It may be mentioned that where the skin has escaped painting (here, and in a deep groove between the right scapula and the vertebral column) the skin is very light in colour. The middle of the back is in a badly damaged condition, probably owing to the body having been put in a damp place long after mummification, or perhaps to decomposition during the process, but red paint may be discerned wherever any fragment of the original skin remains. The skin of the thorax and abdomen (except for a few small holes made by insects in the former) is absolutely intact,<sup>1</sup> and the navel is small and inconspicuous. From a careful examination of the damaged tissues of the back it seems fairly certain that an incision was made on either side of the vertebral column obliquely from the crest of the ilium to the posterior costal margin. Two large oval wounds were thus made in the back and left gaping after the viscera had been excised. On the lower margins of these wounds the skin is 'burred' or reflexed slightly outwards, and traces of red paint may be seen on their edges, which at once shows that they are not accidental breakages, done later, like the rest of the damage to the back and buttocks. It must have been through these openings that the stick, which was thrust upwards through the perineum, was adjusted and pressed downward in a different direction into the thigh, after the removal of the viscera.

The epidermis was not removed, and is present in every part of the body. Traces of hair are discernible in many places, and a number of longish hairs protrude through the red paint on the legs, and on the left great toe is a bunch of hairs.

The feet were submitted to several manipulations. The nails were all carefully removed, the skin round each nail being sharply and cleanly cut, paint afterwards being applied to the whole of the foot and smeared over

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1. The breakage of the skin just above the clavicle is accidental, and was probably done in transit.



these cuts and the sites of the nails.<sup>1</sup> A fusiform incision 32 mm. in length was made, parallel with the sole, in each foot on the inner side, below, and slightly in front of the ankle. The sole of the left foot is intact, but in the right sole is an accidental breakage, through which we can see that the lower part of the foot was stuffed through the incision with some kind of fibrous matter (? grass or the like). The feet are plump and less shrunken than the rest of the body, the packing accounting for this condition. Between the great toe and its neighbour, on the *upper* surface of each foot, about 10 mm. from the angle, is a fusiform incision 17 mm. long. This shows clean cut edges on the left foot, but on the right foot it is completely filled with the egg-cases of cockroaches, which have adhered there and been painted over when the foot was painted. There are other egg-cases in the region of the ankle-incisions, and one under the toes of each foot. On no other part of the body could any traces of insects be found.

These egg-cases afford interesting clues as to the time taken by the various processes of mummification. When the body was vertical the liquid products of decomposition must have escaped through the foot incisions, and it was this putrid matter that evidently attracted the insects. The eggs had been deposited there and duly hatched before the body was finally dried and painted. This postulates a lapse of at least several days, if not longer, between the processes, which is in accordance with what we know (see below). The drainage of fluid from the feet would also account for their unhealthy condition, for when the mummy was painted, decomposition of the feet had become far advanced, for the red paint is applied to the underlying muscular tissue, to the ligaments, and even to the bones wherever they were respectively exposed. The paint was applied to the soles of the feet, which (except for the small breakage aforesaid) are quite intact.

We will now compare this specimen (cited hereafter as B.M.) with the other known Torres Straits mummies. These are six in number and are as follows :—

1. A specimen formerly in the Museum of the Royal College of Surgeons, London, and described by the late Sir William Flower.<sup>2</sup> I am

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1. The thumb and index finger of the left hand were similarly treated. The flesh has broken away from the other digits and from the greater part of the hand, leaving only the bones. The terminal phalanges are missing from the second and fourth fingers. The whole of the right hand is lost.

2. *Journal of the Anthropological Inst.*, vol. VIII, 1879, pp. 389 ff. and Pl. XI.

indebted to Prof. Seligman, F.R.S., and the Council of the Royal Anthropological Institute for permission to reproduce the plate here. (Pl. XII, Fig. 2.) Darnley Island.

- 2-3. Two mummies of children in the Museum für Völkerkunde, Berlin, photographs of which, together with a description, have been published by Drs. Myers and Haddon.<sup>1</sup> Dr. Haddon has kindly given me permission to reproduce them. (Pl. XI, Figs. 2 and 3.) Stephens Island.
- 4-5. Mummies of a woman and of a man in the Queensland Museum, Brisbane, published by Dr. Hamlyn Harris.<sup>2</sup> (Pl. XII, Fig. 1.) Stephens Island.
6. A specimen (unpublished) in the Macleay Museum, Sydney. (Pl. XI, Fig. 1.)

In addition to these actual specimens, we must bear in mind the general description of Torres Straits mummification, published by Drs. Myers and Haddon<sup>3</sup> and by Dr. Hamlyn Harris (*op. cit.*).

All the specimens agree in the following respects :—

- a. Being tied to a bamboo frame (*paier*).
- b. Painted red on body and black on head.
- c. Artificial eyes.
- d. A band painted on the forehead.

No. 1 has been eviscerated through an incision in the right flank, and No. 3 in the left flank, both incisions being sewn up with string. B.M. has two such incisions in the back as well as perforations in the perineum. Nos. 4 and 5 were eviscerated through the perineum. Of No. 6 I have no information. No. 2 was apparently opened in front of and somewhat on the left side of the body.

Inside the body cavity pieces of wood are recorded in B.M., and in 1, 4, and 5. These sticks were evidently used in conformity with a tradition, for they fulfil no purpose. The erect attitude of the body made it needless to pack the cavity, for the skin would not fall in as would be the case in a mummy whose normal position was horizontal; nor are enough pieces used to accomplish this end even if it had been intended. Again, the wood was needless for the purpose of consolidating the mummy, since

1. *Reports*, vol. VI, p. 137 and Pl. XVII.

2. *Mem., Queensland Museum*, vol. I, 1912, pp. 1 ff. and Pl.

3. *Reports*, vol. VI, pp. 136 ff.

it required no such support when tied on the framework. The position of one of the sticks in B.M. furnishes a clue. In the XXIst Dynasty in Egypt, the limbs were packed with material to plump them out into a life-like form, and sticks must have been used to push this material down the arms and legs. The stick in B.M. is driven down the thigh, and hence I conjecture, and in this Prof. Elliot Smith concurs, that when the Egyptian custom, perhaps a bit modified, reached the Torres Straits, the stick was remembered though its proper function had been forgotten.

The custom of painting the head black and the body red, and of tracing a band across the brows, together with the use of artificial eyes, were all adopted by the embalmers in Egypt during the XXIst Dynasty. At this time also the practice of stuffing was introduced. Incisions were made in the hands and feet for packing purposes (and incidentally for drainage also) and in other parts of the body. In the Torres Straits all these remarkable features are found. The foot incisions are made between the great and second toes *on the upper surface of the foot*, in all the Torres Straits specimens, in a position which *precisely* corresponds to that made in the XXIst Dynasty Egyptian mummies.<sup>1</sup> B.M., as already mentioned, has additional incisions in the sides of the feet, through which packing material was actually introduced, and the idea of packing has survived, as suggested above, in the presence of the sticks.<sup>2</sup> Had the foot incisions been made purely for drainage purposes, the obvious position for them would be on the soles instead of on the upper surface of the feet.

B.M. is unique in having the ears ablated. The other specimens all have ornaments suspended from their pierced lobes. It is likewise alone in retaining the epidermis, which was scraped off in the other specimens. It is stated by Dr. Hamlyn Harris<sup>3</sup> that the skin was cut round the tip of each finger and the skin, with the nail attached, was pulled off. The Egyptians likewise paid special attention to the nails, and took care to affix, with thread or wire wound round the fingers and toes, the thimbles of skin with the nails attached, in order that when the epidermis peeled off in the salt-bath the nails should not be lost. The Torres Straits Islanders did not use the salt-bath, but took the corpse down to the sea and treated it with salt water. Here again, the traditional treatment

1. For the details of Egyptian embalming in the XXIst Dynasty see Elliot Smith and Dawson, *Egyptian Mummies*, London, 1924, chapter VII.

2. No. 2 has the body-cavity packed with *meidu*-pith.

3. *Op. cit.*, p. 3.



of the nails survives, but is reversed in practice, for the Torres Straits embalmers took as much care to remove the nails as the Egyptians did to retain them. The absence of hair from every part of the body in No. 1 suggests that in this case also the epidermis was removed.

The method of tying the jaw is identical in No. 1 and B.M., but is not referred to in the other cases.

The significance of the technical details of these mummies in connection with the migration of Egyptian culture has already been dealt with by Prof. Elliot Smith (*op. cit. supra*, especially pp. 21 and 92).

In conclusion, I wish to express my thanks to Mr. W. P. Pycraft of the British Museum for kindly giving me facilities to examine the mummy in his charge, the only one now remaining in this country, for the specimen described by Flower was subsequently unfleshed and mounted as a skeleton in the Museum of the Royal College of Surgeons. It is fortunate that better counsels have prevailed at the British Museum and that the wishes of the donor have been respected, for a letter from him to Dr. Gunther, then Keeper of the Zoological Department, fully expresses his views :—

‘ In reference to the New Guinea or rather Torres Straits Island mummy presented to the British Museum by me, I think it ought to be retained in its present condition as an almost unique specimen not likely to be easily acquired. If, however, in the cause of science and for special scientific purposes it is thought desirable to resolve it into a skeleton, I should like to be consulted.’

I am also indebted to Mr. Pycraft for the photograph of the specimen here reproduced. (Pl. X.)



MUMMY FROM TORRES STRAITS IN THE BRITISH MUSEUM (NAT. HIST.).







Fig. 1. MUMMY IN THE MACLEAY MUSEUM, SYDNEY.

Figs. 2 and 3. MUMMIES OF CHILDREN, BERLIN.





Fig. 1. MUMMIES IN THE BRISBANE MUSEUM.

Fig. 2. MUMMY FORMERLY IN THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS, LONDON.





## THE FABLE OF THE GOAT AND THE VINE

By W. R. HALLIDAY

Frigora nec tantum cana concreta pruina,  
Aut gravis incumbens scopulis arentibus aestas,  
Quantum illi nocuere greges, durique venenum  
Dentis, et admorsu signata in stirpe cicatrix.  
Non aliam ob culpam Baccho caper omnibus aris  
Caeditur.

VERGIL, *Georgic*, II, 376-381.

THIS theory that goats were sacrificed to Dionysus *per contrarietatem*, as Servius puts it, is in fact mistaken, but it is older than Vergil and possibly older than Theophrastus, who is presumably the source of Porphyry, *de abst.*, II, 10. Voigt (Roscher, *Lex.*, I, p. 1058) has noticed that both Leonidas of Tarentum (*Anth. Pal.*, IX, 99) and Euenos of Ascalon (*Anth. Pal.*, IX, 75) have written epigrams on the vine's retort to the browsing goat that it will live to provide wine at the latter's sacrifice. The popularity of the verses of Euenos are attested by a passage in Ovid, *Fasti*, I, 357, by the jest in Suetonius, *Domitian*, 16, and by inscriptions from Pompeii (Diehl, *Pompeianische Wandinschriften*, pp. 821 foll.). But Voigt has not noticed that these two epigrams are metrical versions of a fable of Aesop, *viz.* Aesop (Hahn) Nos. 404, 404*b*, Babrius (Schneidewin) No. 145. Now Leonidas of Tarentum *floruit circa* 270 B.C. It is therefore not at all improbable that his source was the lost collection of Aesop's Fables made by Demetrius of Phaleron. If that is so, the not uninteresting result has been achieved of adding another to the list of fables which belonged to the earlier Greek, as opposed to the later Graeco-Roman, Aesop.

But the establishment of this date for the circulation of the Greek fable has some importance in relation to the Greek version of the *Book of Ahikar*. Smend<sup>1</sup> has pointed out not only that Aesop, Nos. 404, 404*b* is a

1. R. Smend, 'Alter und Herkunft des Achikar Romans und sein Verhältniss zu Aesop,' *Beiheft zur Zeitschrift für die alt-testamentliche Wissenschaft*, XIII. (Giessen, 1908), p. 80.

variant of a fable which is to be found in the *Book of Ahikar* but also that there are good grounds for supposing the Greek version to be secondary.

The *Book of Ahikar*, as will be generally known, falls normally into four sections. 1. The introduction, in which the aged and childless Ahikar adopts his nephew and obtains the royal assent to retire from the post of vizier in his favour. 2. A series of gnomic sayings or proverbs by which Ahikar endeavours to instruct the young man for his duty. 3. Ahikar's disgrace is successfully plotted by the treacherous nephew, but Ahikar is secretly saved by his executioner. The king of Egypt demands the solution of riddles on threat of war; Ahikar is discovered, undertakes successfully the answering of the riddles, and is restored to favour. 4. The nephew is handed over to Ahikar, who delivers himself of a series of maxims and fables directed to the topic of the righteous nemesis which ultimately attends wrongdoing, after hearing which the villain swells up and bursts asunder. Sections 1 and 3 form the story frame for 2, maxims of practical worldly wisdom, and 4, fables to illustrate the wages of sin and folly.

Of the texts of Ahikar published by Dr. Rendel Harris,<sup>1</sup> which are later than the papyrus, the fourth section is entirely missing from the Ethiopic and the old Turkish versions, but in all the others there occurs, in this fourth section, the fable of the retort of a plant to the animal which is browsing on its leaves. 'Eat away,' says the plant, 'but when you are dead my root will be used to tan or dye your hide.' This occurs in the Syriac version (gazelle and sumach-tree, p. 123), the Slavonic (goat and fustic, p. 21), Armenian A (goat and madder, p. 52), Armenian B (goat and madder, p. 82), and Arabic (gazelle and madder, p. 156). Its appearance in all the versions which contain at all the section to which it belongs, suggests that it belongs to a prototype from which they all derive.

It can hardly be doubted that either the Aesopic fable is derived from Ahikar or the Ahikar fable from Aesop. At the time at which Smend wrote, the papyrus had not been published, nor on the other hand was he aware of the early date which can definitely be assigned to the Greek fable. Further, his view that coincidences between Ahikar and Aesop proved the existence of a Jewish influence upon Greek fable will necessarily be modified by the evidence of the Aramaic papyrus for which, according

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1. Conybeare, Rendel Harris and Lewis, *The Story of Ahikar*, second edition, Cambridge, 1913. For convenience I shall refer to these as the modern versions.



to the best opinion,<sup>1</sup> a Mesopotamian rather than a Jewish original must be postulated. But his argument that the Greek must be the secondary version, because in adapting the fable to the different end of explaining Greek sacrificial ritual the point has been blunted, is surely incontrovertible. A curious detail in the form of the two earliest Greek versions which we possess perhaps confirms his argument. The admirable brevity of Euenos may be quoted in full :

κῆν με φάγῃς ἐπὶ ῥίζαν, ὅμως ἔτι καρποφορήσω  
ὅσσον ἐπισπείσαι σοί, τράγε, θυμένω.

Now a vine *eaten to the root* by the poisonous teeth of a goat (*durique venenum dentis*) could only by poetic licence be expected ever to bear fruit again. None the less in Leonidas too we find the phrase *ρίζα γὰρ ἔμπεδος οὔσα*, which Paton, no doubt conscious of the awkwardness, translates 'my stem is entire.' May not this awkward *ρίζα* be a clumsy echo of the forgotten original in which the root in fact supplied the point of the plant's retort?

But however that may be, while the derivation of the Greek from the Ahikar version is intelligible, that of the Ahikar version from the Greek is not.<sup>2</sup> The logical deduction is surely that at some date prior to 270 B.C. a transference from Ahikar to Aesop took place. If upon other grounds a Greek version of the *Book of Ahikar* is known to have existed, it becomes almost certain that this book was in circulation before 270 B.C., and probable that it was in existence before the publication of Demetrius of Phaleron's Aesop. Further, since the Greek version of the *Goat and the Vine* is a modification of the Ahikar fable, there may well have been an intermediary source. If the descent of the modern versions from a Greek original is allowed, and the correspondence of Sharestâni's citations from Democritus with the modern Ahikar books would seem to make this certain, this Greek original will have contained the *Goat and*

1. Cowley, *Aramaic Papyri of the Fifth Century B.C.*, Oxford, 1923, p. 205, Ed. Meyer, *Der Papyrusfund von Elephantine*, pp. 113 foll.

2. Smend is successful in showing priority upon similar grounds for the Ahikar version in the case of other coincidences. *E.g.* Aesop, 340, *The Fowler and the Lark* is a poorer variant of the Ahikar (Rendel Harris, Syriac, p. 124, Armenian A, p. 53, Armenian B, p. 83, Slavonic, p. 22, Arabic, p. 157). Further, the Ahikar version, according to Smend, pp. 80-81, is developed from a play upon the similarity of the Aramaic words for 'to set a snare' and 'to pray', comparable to a pun in English on 'to prey' and 'to pray.' If this is right, it seems to me conclusive for the priority of the Ahikar version. But I cannot date the Greek fable, and it is therefore not by itself so strong an argument as the *Goat and the Vine* for early priority.

*the Vine* not in the Aesopic form, but in the original form. It is of course a pure guess, but perhaps a plausible guess, that the Aesopic turn was given to the fable by Theophrastus, the master and friend of Demetrius of Phaleron, who wrote not only *περὶ Δημοκρίτου* but also an *Ἀκίχαρος* (Diog. Laert. V, 50). That Theophrastus was interested in sacrificial ritual, and, as already noted, is the main source of Porphyry upon such matters, does not diminish the probability of the hypothesis as applied to our particular fable. The hypothesis will, of course, be disproved if it can be shown that any of the Aesopic fables, which are certainly secondary adaptations of *Aḥikar*, can be traced earlier than Demetrius. Hitherto I have failed to trace any but it must, of course, be admitted that the material is fragmentary and elusive.

But whatever were the contents of Theophrastus' *Aḥikar*, there must have been in existence at the very beginning of the third century a Greek version of the *Book of Aḥikar* the contents of which resembled the later tradition of that work and not the Aesopic tradition. The establishment of this fact has obviously a bearing upon the problem of the genuineness of the *Book of Aḥikar* attributed to Democritus. A well-known passage of Clement of Alexandria (*Strom.* I, 15, 9) shows that it was then in circulation, *Δημόκριτος γὰρ τοὺς βαβυλωνίους λόγους ἠθικοὺς (?) πεποιήται· λέγεται γὰρ τὴν Ἀκικάρου στήλην ἐρμηνευθεῖσαν τοῖς ἰδίους συντάξαι συγγράμμασι*. That the contents of this Democritean work were similar to the contents of our *Book of Aḥikar* is confirmed by the citation in the *Book of Religions and Sects* of Sharastāni (1071-1153 A.D.) of sayings of Democritus which can with certainty be identified with passages in *Aḥikar* (see Smend, *op. cit.*, pp. 67 foll.). Further the identification of Democritus, Frag. 147 (Diels, *Vorsokratiker*<sup>3</sup>) with *Aḥikar* (Rendel Harris, p. 125, Syriac; p. 54, Armenian A; p. 158, Arabic) can hardly be doubted when Plutarch, *de sanit. praec.* 14, 129A, is put beside Clement, *Protrept.*, 10, 92, 4. The same book, which was known to Clement, passed therefore in the hands of Plutarch as a work of Democritus. I do not think that there is earlier evidence for book and author in combination. Now before the discovery of the papyrus at Elephantine it was thought that the *Book of Aḥikar* itself was a secondary compilation belonging at the earliest to a Hellenistic date. It followed that the attribution of a Greek version to Democritus must be fraudulent. But now that the Aramaic copy of the *Book of Aḥikar*, which cannot have been written later than 400 B.C., has come to light, it ceases to be *a priori* incredible that Democritus (460-351 B.C.)

should have translated it into Greek from an Oriental source. In consequence both Rendel Harris (p. xevi) and Cowley (p. 206) are prepared to substitute Democritus for Pseudo-Democritus. It is true that the great authority of Diels, whose third edition of the *Fragmente der Vorsokratiker* (pp. 122 foll.) discusses the passage in Clement with full knowledge of the existence of the papyrus, pronounces still, as against Gomperz and Eduard Meyer, for an Alexandrine forgery of about the third century B.C. I do not personally find his arguments imperative. He draws attention to features which would be compatible with a work written in the third century B.C., but are far from proving that the work must have been written in the third century B.C. and cannot have been written earlier. Our investigation of the history of the *Goat and the Vine* seems to me to strengthen the case against him; for if, as he would contend, a Democritean *Book of Ahikar* was compiled after 270, there must have been previously in circulation another Greek *Ahikar* of Oriental origin which did not pass as Democritean. Only the attribution, not the book, will be the fraudulent work of the Alexandrines.

The relation, however, of the version in the Aramaic papyrus to the Democritean Greek version raises some serious difficulties. With very great diffidence, one who is neither a Semitic scholar nor an Egyptologist may venture to make a few remarks on a subject belonging to a field with which he is but superficially acquainted. In *Folk-Lore*, XXXIV, pp. 135-140, I made a wild guess, which I still believe may turn out with greater knowledge to prove correct, *viz.* that many of the early coincidences between Greek and Oriental *märchen* and fables may be due, not to direct contact, for which it has always been difficult to find adequate opportunity, but to the borrowing of both from a common source in the lost secular literature of Egypt and the Middle East, of which a fragmentary specimen has thus come to light. I very much hope that the papyrus and the traditional *Ahikar* will be carefully examined on the one hand by some scholar who is really conversant with Oriental stories and on the other by some competent Egyptologist from the point of view of Egyptian gnomic literature. For it should be emphasised that the *Book of Ahikar* itself stands at the end and not at the beginning of a literary tradition, and that whatever historical foundation there may or may not be for the names of its characters, much of its contents must be older than Sennacherib.

Now first of all it may be noted not only that the *Goat and the Vine* is absent from the Aramaic version, but that there are extraordinarily few



parallels between the fables and parables in the modern versions and those which chance has preserved upon the papyrus. This has naturally struck both Rendel Harris (p. xciii) and Cowley (p. 211). Of course a popular proverbial book is liable to change by omission and accretion, but the difference goes deeper than that. Not only are the longer modern versions liker each other but they are quite clearly liker the Democritean *Ahikar* than any of them is, or the Democritean *Ahikar* can have been, to the papyrus. This is very remarkable. I have rather reluctantly come to what may seem a very extravagant conclusion, viz. that the Aramaic papyrus represents a bad tradition.

I have already mentioned the four parts into which the *Ahikar* story normally falls. Of these the papyrus omits 2, the series of admonitory proverbs. The omission is certain because there is no break in the continuity of the papyrus at the point at which the proverbs should occur (Cowley, p. 209). Now it may be remarked that while the poorer modern versions drop section 4, section 2 is never omitted. But what to my mind is conclusive, is this. Sections 1 and 2 together form a conventional literary type which goes back to the oldest extant piece of literature, the *Proverbs of Ptahhotep*,<sup>1</sup> the story of the old vizier who gains the royal assent to the appointment of his successor and proceeds to give proverbial instruction to the young man. Mr. Mace has drawn attention to certain similarities between Ptahhotep and *Ahikar*, and, though it must be confessed that his proverbial extracts have a generic rather than an exact similarity, the parallel between the opening of the two works is very striking.<sup>2</sup> Now I find it difficult to believe that, where you have a literary formula of this kind definitely established, as it appears to have been in Egyptian literature, and the first half of the modern versions corresponds to this formula, the aberration of the papyrus copy represents the original tradition.

In the papyrus then sections 1 and 3 run continuously. They substantiate the antiquity of the story frame and confirm the narrative parts of *Ahikar*. The expedition to Egypt and the riddling contest are absent, but here it is quite possible that the fragmentary state of the

1. Like *Ahikar*, Ptahhotep is an historical character, vizier to one of the Pharaohs of the Vth Dynasty. The earliest extant text of his sayings belongs to the Middle Kingdom, i.e. five hundred years later. The text unfortunately appears to be exceedingly difficult and I can find no reliable translation which is sufficiently complete to form a basis of real comparison. Selected passages are translated in Breasted, *Religion and Thought in Ancient Egypt*, pp. 226-237.

2. *Liverpool Annals of Archaeology and Anthropology*, IX, pp. 6-8.

papyrus is responsible. I should in any case venture to disagree with Dr. Rendel Harris (p. xciii), who thinks it probable that the missing incidents are not primitive. Again my ground is that of literary tradition. Although I do not know of an exact earlier parallel, the generic resemblance of the story in the Sallier papyrus about the allegation of the Hyksos king that the hippopotamuses of Thebes disturbed his royal slumbers, to the incidents in this section of *Aḥikar* and the corresponding portion of the *Life of Aesop* is obvious, and has more than once been noticed.<sup>1</sup>

At the end of the narrative the papyrus gives a number of fables and proverbs, the text of which is mutilated and fragmentary. They tend, however, to confirm our suspicion that we are dealing with a muddled version. In the modern texts the proverbs and fables are upon the whole distinct in character as well as in position; displacements of admonitory proverbs into the section of vindictory fables or *vice versa* occur but are rare. In the papyrus, on the other hand, the proverbial matter at the end is a mixture of the two kinds of saws.

I am myself inclined to believe, though I admit that it cannot be proved, that the tradition that Democritus translated the *Book of Aḥikar* into Greek from a Babylonian source may be trusted. Quite unnecessary trouble has been caused by the statement made about him, not by him, that he copied it from a *stele*. Cowley's suggestion (p. 207) that a cuneiform tablet was meant by *stele* seems to me improbable in the extreme. The counterpart to Democritus' *stele* is to be found in the golden pillars of Euhemerus' theological romance.<sup>2</sup> Nor, in spite of the parallel of Euhemerus, should I agree with Diels that the *stele* necessarily brands the work as a *Schwindelbuch* of the third century B.C. It is quite true that it is a feature of such works then, as later, to claim fictitious documentary sources for the statements which they contain. I have mentioned some examples in a paper upon Damis of Nineveh and Walter of Oxford, the Mrs. Harrises, if I am not mistaken, of Philostratus and Geoffrey of Monmouth respectively (B.S.A., XVII, pp. 234 foll.). But in a sense all historical romances are *Schwindelbücher* and the fictitious documentary source is, in all ages and lands, a normal feature of its machinery of presentation. I can see no

1. E.g. by Gunn and Gardiner, *Journal of Egyptian Archaeology*, V, pp. 40 foll., Maspero, *Contes populaires de l'Égypte Ancienne*, fourth edition, pp. xxvi-xxvii. References are there given to some similar generic parallels in later Egyptian literature.

2. I should agree with Rohde (*Griechische Roman*, p. 222), in acquitting Euhemerus of any intention to deceive by his romantic introduction. The line between honest romance and romantic pseudo-history is narrow; both kinds of writing employ the same machinery.



reason at all why it should not have appeared in a romance written in Greek before the third century. It is indeed one of the regular conventions of ancient Egyptian works of this general character to claim to be copies of some authentic original papyrus or monument of remote antiquity which has fortunately come to the writer's knowledge.

Dr. Rendel Harris (p. xliii) naturally makes reference to Aesop's statue and pillar, but the claim, which may be part of Democritus' preface, if he is responsible for it at all, rather than part of his text, seems in any case intelligible enough, even though it does not occur in the papyrus nor in the modern versions. Greeks were of course familiar in the fifth century with the elaborate and boastful records of the Oriental monarchies (Herodotus II, 102). I believe further that Eduard Meyer is right in deriving this literary form of narrative in the first person precisely from the influence of such monuments, of which it is the habit to recount in *oratio recta* and in the form of a royal statement the great achievements of the king. 'The outward form is that of the personal narrative of the sage. For us this form, the "I" romance, passes as a highly developed art product of the most refined technique. But in reality it is extremely ancient (uralt). In the East it developed out of the victory inscriptions of the kings and the reports and tomb inscriptions of the high officials which gave to narrative literature, as it came into being, its outward form.' (*Der Papyrusfund von Elephantine*, p. 116.)

But granted that Democritus drew upon an Oriental document, I have little doubt that both the arrangement and the contents of his book were much nearer to the modern versions of *Ahikar* than to the Aramaic papyrus. This is obviously a difficult position but I see no escape. The dating of the Aesopic form of the *Goat and the Vine*, on the other hand, instead of raising difficulties helps to solve some. It makes it almost certain that the fable was in Demetrius of Phaleron and therefore suggests that a Greek *Ahikar* must have been in existence before that date. The case for Democritus, as opposed to Pseudo-Democritus, is therefore strengthened, for if we throw over Democritus we must replace his *Ahikar* by another.



## REVIEWS

*The Rhind Mathematical Papyrus, British Museum 10057 and 10058.* Introduction, Transcription, Translation, and Commentary by T. ERIC PEET, Brunner Professor of Egyptology in the University of Liverpool, etc. The University Press of Liverpool, London, Hodder and Stoughton, ii+136 pp., 24 plates.

It is forty-seven years since Professor Eisenlohr of Heidelberg stole a march on Dr. Birch at the British Museum and published a facsimile of this famous papyrus, with translation and commentary. His work was remarkable for the time, but the progress of knowledge has long since given to it an extremely antiquated appearance. It was high time that a new translation was made, and Professor Peet, combining skill in mathematics with his Egyptology, was the ideal person to undertake it. The numerical figures remain much as they were, and large sections consisting almost entirely of numerals show little change, but apart from the numerals the transcription of the hieratic looks now very different, and the explanations given have a certainty and finality which the first tentative version could not possess.

In his introduction Professor Peet explains very lucidly the arithmetical system and procedure of the Egyptians, and here and in the commentary he shows how completely devoid they were of general formulae and principles. Results obtained empirically were noted down by the scribes and utilised to simplify calculation for practical purposes; but of abstract and constructive thought there is strangely little evidence. The Egyptian numerical system as is well known was decimal, and contrasts strongly with the abnormal Babylonian sexagesimal system. Their treatment of fractions is very curious and interesting.

The Rhind Papyrus in the British Museum consists of two disjointed sheets, and it is satisfactory that some small fragments have now come to light in the Museum of the New York Historical Society which absolutely link the two sheets together and offer some new details. It is a strange fact that while the Rhind Papyrus is professedly the copy made in the Hyksos period of a work of the Twelfth Dynasty, all other mathematical documents known from Ancient Egypt date from the same Twelfth Dynasty. Yet it can hardly be doubted that the mathematical system, like its numerals, its weights, and its measures, was developed at least as early as the Old Kingdom.

Mistakes of the scribe occur, sometimes of appalling magnitude: in the case of one problem (No. 84) Professor Peet despairs of recovering its correct form, in other cases, as in No. 43, the cause of the error is



ingeniously tracked. Amongst new readings an outstanding example is the recognition of the word *wer*, 'how much?' in a difficult hieratic group. While little improvement could be made in the translation of the first great table, namely that of the division of 2 by odd numbers (beyond the addition of one item from the New York fragments), even there Professor Peet has been able to recognise for the first time how the calculator reached his results.

Altogether we accept the volume with a deep sense of satisfaction. Concise, yet elaborate and complete, the treatment of the papyrus itself is practically final, and future discovery can do little more than adjust its relationship to other documents as they may appear. Professor Peet's aim has been to make the edition useful both to the historian of mathematics who knows no Egyptian and to the Egyptologist who knows nothing of the history of mathematics, and it will be indispensable to each. For a copy of the hieratic the student will of course go to the facsimile issued by the British Museum or to Eisenlohr's copy. The following notes may be worth adding:—On p. 24 read *ht n nwh* as the name of the 'reel of cord,' the word *ht* being always masculine. The rare word *dn* in No. 71 seems to recur in a difficult passage in Pap. Anast. V, 7/5, 'the water-lily is in full leaf (?), the *ur*d-bird is *dn* (mature ?)'; in No. 82 I should propose to read the name of the duck-yard and pool as *nmt.t 3pd.w* 'the fowls' walk.'

F. LL. GRIFFITH.

*Altikreta: Kunst und Handwerk in Griechenland, Kreta und auf den Kykladen während der Bronzezeit*, von HELMUTH TH. BOSSERT, Berlin, Ernst Wasmuth, 2nd Edition, 40 pp., 256 plates.

Nothing but praise is deserved by this compendious atlas of Aegean art. The plates, which are in half-tone, are well reproduced, and only rarely, as perhaps in the case of the inlaid daggers from Mycenae, is the scale too small. The work is thoroughly up-to-date, including as it does examples of 'Early Helladic' ware ('Marinakeramik') from Leukas and Korakou, Knossian fresco fragments first published in Evans' *Palace of Minos*, and Captain Spencer-Churchill's bronze bull-grappling group; while it gets additional value by reproducing various unpublished seals and rings and some unpublished ivories from Mycenae. Full references to literature are given in the notes, which though short are enough to show that the author has his own ideas. We observe, for instance, the statement that the spiral motif reached Crete through the Cyclades indeed, but from Egypt, a view not usually held. It is plain, too, from the brief introduction, that the author is inclined to look chiefly to Asia Minor for the sources of Minoan culture, and to make less than most scholars of the debt of Crete to Egypt. These ideas thrown out by the way give a dash of salt, a flavour of personality, and raise the work from the level of mere compilations. Herr Bossert's arguments should be interesting, but he recognises of course that discussion of obscure problems is impossible in the space here at his disposal.

J. P. D.